

AD-A118 934 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/8 4/2  
19310A MURS, MISSILE NUMBERS BN-130, BN-129, BN-128, RN-146, RN--ETC(U)  
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19310A MLRS, Missile Number BN-130,BN-129,BN-128,BN-146,BN-114,BN-166, Round Number V-283/PQ-23 thru V-288/PQ-28 are presented in tabular form.		

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CONTENTS	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
TABLES	
1. Surface Observation Taken at 1352 & 1624 MDT at D-3 $\frac{1}{2}$ -----	4
2. Launch and Impact Area pilot-balloon Measured Wind Data at 1352 MDT-----	5
3. Launch and Impact Area pilot-balloon Measured Wind Data at 1623 MDT-----	6
4. Aiming and T-Time Computer Met Messages-----	7
5. NW-30 Significant Level Data at 0915 MDT-----	9
6. NW-30 Upper Air Data at 0915 MDT-----	10
7. NW-30 Mandatory Levels at 0915 MDT-----	14
8. E-28 Significant Level Data at 1015 MDT-----	15
9. E-28 Upper Air Data at 1015 MDT-----	17
10. E-28 Mandatory Levels at 1015 MDT-----	21
11. E-28 Significant Level Data at 1325 MDT-----	22
12. E-28 Upper Air Data at 1325 MDT-----	24
13. E-28 Mandatory Levels at 1325 MDT-----	28
14. NW-30 Significant Level Data at 1352 MDT-----	29
15. NW-30 Upper Air Data at 1352 MDT-----	30
16. NW-30 Mandatory Levels at 1352 MDT-----	34
17. E-28 Significant Level Data at 1623 MDT-----	35
18. E-28 Upper Air Data at 1623 MDT-----	36
19. E-28 Mandatory Levels at 1623 MDT-----	40

## INTRODUCTION

19310A MLRS, Missile Numbers BN-130, BN-129, BN-128, BN-146, BN-114, and BN-166, Round Numbers V-283/PQ-23 thru V-288/PQ-28, were launched from Brillo, White Sands Missile Range (WSMR), New Mexico, at 1352:01, 1352:06, 1352:10, 1622:59, 1623:04, and 1623:09 MDT, 21 Jul 82. The scheduled launch times were 1315, 1315:04.5, 1315:09, 1600, 1600:04.5, and 1600:09. MST.

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the D-3 $\frac{1}{2}$  Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

#### SITE AND ALTITUDE

D-3 $\frac{1}{2}$	2 km	1352 MDT
MAL	2 km	1356 MDT
MAL	2 km	1627 MDT

(2) Air structure data (rawinsonde) were collected at the following Met Sites:

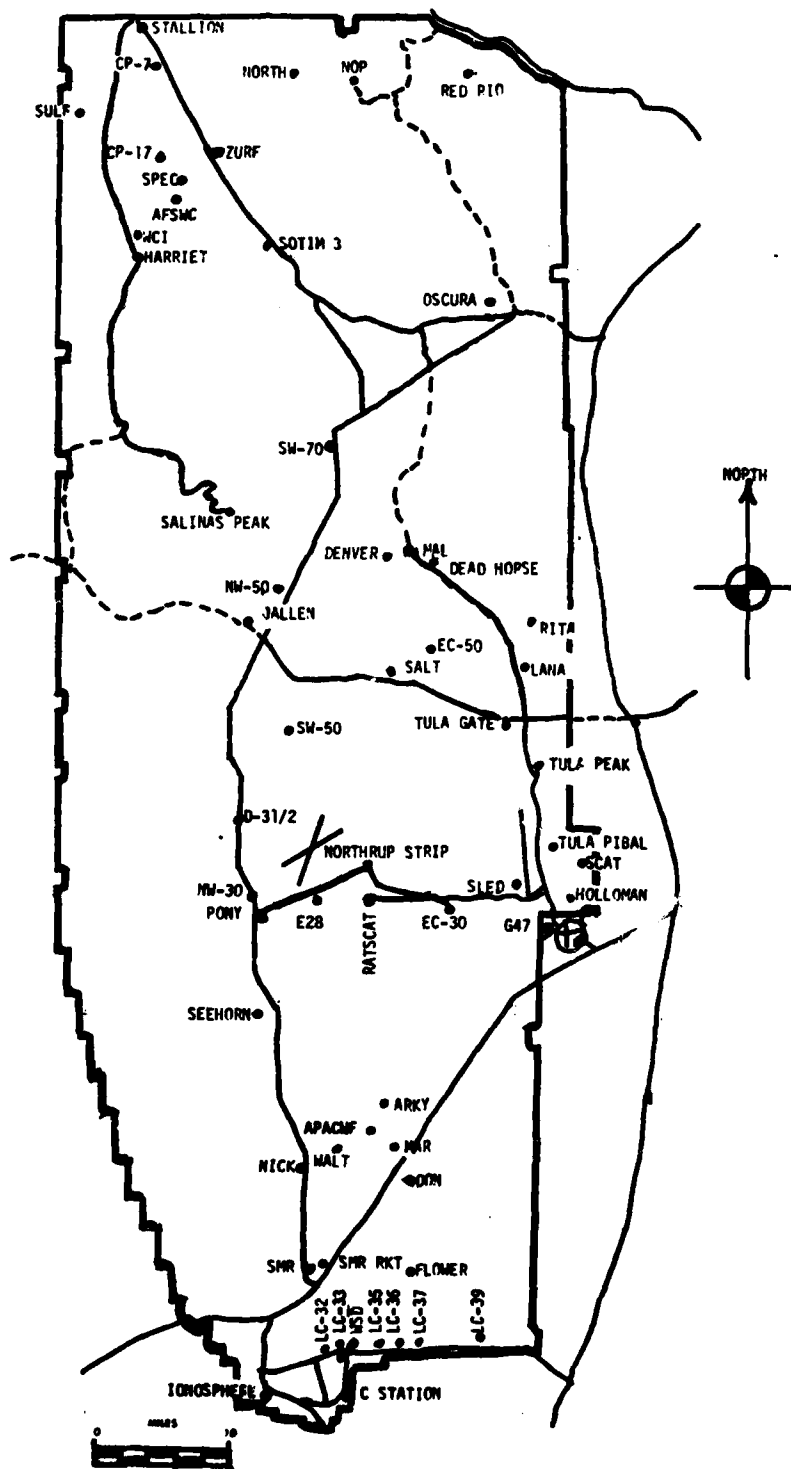
#### SITE AND TIME

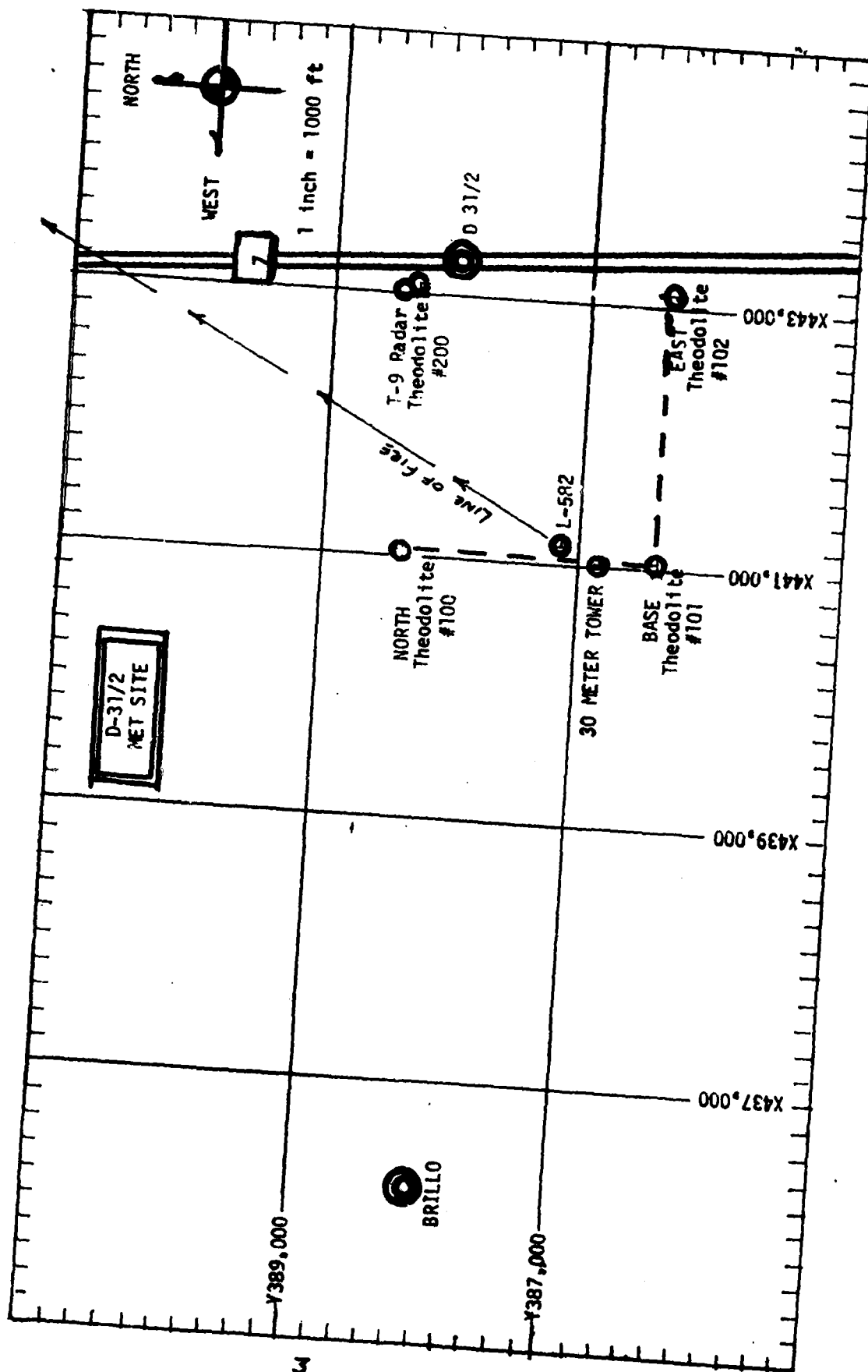
NW-30	0915 MDT
E-28	1015 MDT
E-28	1325 MDT
NW-30	1352 MDT
E-28	1623 MDT



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Justification	
By	
Distribution/	
Availability Codes	
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A	

# WSMR METEOROLOGICAL SITES





# PROJECT SURFACE OBSERVATION

STATION D34									
DATE 21		Jul		82		X= 441,121.6		Y= 387,107.8 H= 4005.2	
TIME		PRESSURE		TEMPERATURE		DEW POINT		RELATIVE HUMIDITY	
M D I		HDS		OF		OC		%	
1352		880.2	93.5	34.2	56.4	13.5	29	990	40
1624		879.1	96.6	35.9	64.4	17.9	35	980	40

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	AMT	TYPE	AMT	TYPE	
	7	SC	5000	2	AS	12,000	
	6	SC	6000	1	AS	12,000	

## PSYCHROMETRIC COMPUTATION

TIME:	MST	1352	1624
DRY BULB TEMP.		93.5	96.6
WET BULB TEMP.		68.2	73.3
WET BULB DEPR.		25.3	23.3
DEW POINT		56.4	64.4
RELATIVE HUMID.		29	35



TABLE 2

1-TIME PILOT-BALLOON TRACKING WIND DATA

DATE 21 July 1982

SITE: D-3½

TIME: 1352 MDT

WSTN COORDINATES:

X= 441,053.12

Y= 386,316.94

H= 4,008.31

SITE: MAL

TIME: 1356 MDT

WSTN COORDINATES:

X= 509,421.05

Y= 495,563.18

H= 4,126.81

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	120	09
150	124	04
210	125	05
270	125	05
330	124	06
390	124	06
500	122	06
650	127	06
800	132	07
950	136	10
1150	142	15
1350	146	20
1550	152	17
1750	029	03
2000	093	06

Data obtained from double  
Theodolite Tracked  
pilot-balloon observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	200	02
150	211	11
210	210	12
270	208	12
330	207	12
390	206	12
500	207	12
650	195	11
800	179	10
950	179	11
1150	175	08
1350	168	05
1550	188	03
1750	107	05
2000	079	07

Data obtained from single  
Theodolite Tracked pilot-balloon  
observation.

TABLE 3

1-TIME PILOT-BALLOON RELEASE

DATE 21 July 1982

SITE: D-3 $\frac{1}{2}$   
 TIME: 1623 MDT  
 WSTN COORDINATES:  
 X= 441,053.12  
 Y= 386,316.94  
 H= 4,008.31

SITE: MAL  
 TIME: 1627 MDT  
 WSTN COORDINATES:  
 X= 509,421.05  
 Y= 495,563.18  
 H= 4,126.81

LAYER	MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE			
150		DATA	
210		NOT	
270		AVAILABLE	
330			
390			
500			
650			
800			
950			
1150			
1350			
1550			
1750			
2000			

LAYER	MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		170	03
150		141	09
210		140	10
270		142	10
330		144	10
390		144	09
500		140	06
650		130	04
800		120	04
950		107	04
1150		083	04
1350		072	04
1550		047	03
1750		032	03
2000		024	02

Data obtained from single Theodolite  
 Tracked pilot-balloon observation.

TABLE 4

## AIMING AND T-TIME COMPUTER MET MESSAGES

21 July 1982

NW-30 0915 MDT	E-28 1015 MDT	E-28 1325 MDT
METCM1329065	METCM1329064	METCM1329064
211530121882	211630119885	211940119884
00000000 29900882	00000000 30110885	00000000 31150884
01576004 29930872	01034002 30000875	01275005 30810874
02296004 29940848	02353004 29990850	02253006 30460850
03234007 29670810	03252007 29790812	03257008 30120812
04630004 29410764	04057002 29520767	04161002 29720767
05078002 29040721	05050006 29070723	05131005 29280724
06055001 28610680	06079006 28650682	06120007 28830683
07111008 28170640	07092009 28300642	07102008 28350643
08187006 27770602	08124006 27830604	08097009 27900606
09185006 27380566	09193003 27380568	09018003 27440569
10165006 27010532	10173003 27030534	10630004 27110535
11100007 26700499	11093005 26670501	11091005 26810502
12030004 26250453	12052005 26260455	12141003 26350456
13133006 25650397	13153006 25720399	13182007 25790400
14096016 25000347	14155012 24990349	14187013 25080350
15132017 24240303	15152017 24280304	15159017 24330305
16145013 23420262	16155011 23520264	16102012 23570265
17021009 22630226	17085011 22740227	17123016 22780229
18053011 21920194	18079014 21980195	18166018 21960196
19155015 21210166	19122013 21170167	19142015 21320168
20162014 20650141	20177015 20720142	20176013 20750143
21110020 20370120	21123019 20290120	21130020 20280121
22125025 20350101	22136027 20320102	22146028 20270102
23192022 20840086	23166025 20870086	23173024 20670087
24177018 21130073	24152021 21080073	24163026 20940074
25156029 21100062	25161026 21150063	25191028 21450063
26163031 21490053	26167030 21550053	26173027 21660054

TABLE 4 cont'd

## AIMING AND T-TIME COMPUTER MET MESSAGES

21 July 1982

NW-30 1352 MDT	E-28 1623 MDT
METCM1329065	METCM1329064
211990121881	212240119882
00000000 30970881	00160004 31030882
01257006 30820871	01192007 30860872
02154005 30470847	02245008 30560848
03303001 30110810	03274007 30180811
04112003 29670765	04259004 29710766
05140003 29210722	05195002 29230723
06109006 28760681	06181004 28800682
07109006 28300641	07130007 28390642
08092008 27840603	08024006 27940605
09038003 27430567	09015008 27540569
10093003 27180533	10639006 27120534
11141008 26880500	11210004 26860502
12117003 26390455	12203008 26330456
13167007 25740399	13141010 25630400
14181011 25010349	14160011 25050349
15173013 24250304	15155013 24270304
16115012 23470263	16118011 23500264
17126014 22690227	17158012 22660228
18167014 21920195	18174012 21850196
19122014 21280167	19107014 21220167
20165012 20680142	20133014 20610142
21118021 20220120	21145028 20230120
22149029 20350102	22183032 20380102
23166021 20670086	23198016 20660086
24172024 21020073	24208023 20980073
25187025 21320062	25172027 21280062
26161028 21610053	26151028 21540053

STATION ALTITUDE 4010.40 FEET MSL  
21 JULY 62 0915 MDT  
ASCENSION NO. 17

SIGNIFICANT LEVEL DATA  
2020220017  
NW 30

GEODETIC COORDINATES  
32.06497 LAT LLLG  
106.49714 LONG LLLG

TABLE-5

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	DEWPOINT DEGREES	REL. HUM. PERCENT
MILLIBARS	MSL FEET	DEGREES	CENTIGRADE	
882.5	4010.4	24.2	10.5	42.0
869.1	4444.1	24.3	11.9	46.0
863.4	4633.7	24.9	12.0	47.0
850.0	5084.9	24.6	12.9	48.0
785.1	7356.3	19.9	10.5	54.0
767.1	8014.1	19.8	9.4	51.0
700.0	10581.5	13.8	4.7	54.0
626.1	13633.1	5.7	2.0	77.0
590.0	15224.0	2.4	-2.3	71.0
565.4	16352.1	-4.4	-2.4	86.0
541.1	17503.7	-3.2	-4.5	91.0
500.0	19550.6	-6.5	-9.1	82.0
473.2	20959.3	-10.4	-12.1	67.0
471.0	21076.7	-9.3	-14.0	54.0
463.4	21490.8	-9.3	-15.8	59.0
421.4	23884.2	-14.8	-18.7	72.0
412.3	24427.8	-15.3	-23.1	51.0
400.0	25178.5	-17.0	-23.5	57.0
386.4	26031.8	-17.9	-22.5	67.0
377.4	26611.1	-18.8	-25.2	57.0
314.0	3134.8	-28.8	-36.1	49.0
300.0	32104.3	-31.3	-40.0	39.0
260.2	35370.1	-39.3	-49.4	33.0
250.0	36267.2	-42.0		
200.0	41126.2	-53.0		
182.4	43069.1	-56.5		
164.6	45168.1	-61.5		
150.0	47071.3	-65.9		
132.0	49500.5	-67.4		
123.4	50950.9	-69.9		
113.0	52681.2	-69.6		
103.3	54439.7	-71.2		
100.0	55075.9	-69.6		
80.4	59441.5	-62.7		
70.0	62269.9	-61.3		
60.4	65281.3	-62.9		
50.0	69187.0	-56.2		
34.0	74672.0	-52.2		

STATION ALTITUDE 4010.40 FEET MSL  
21 JULY 82 0915 NDT  
ASCENSION NO. 17

UPPER AIR DATA  
2020220017  
NW 30  
TABLE-6

GEODETIC COORDINATES  
32.80497 LAT DEG  
106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) SPEED (KNOTS)	INDEX OF REFRACTION
4010.4	082.5	24.2	10.5	42.0	1026.0	073.0	0	1.000284
4500.0	867.4	24.5	12.2	46.3	1009.0	074.2	144.4	1.000286
5000.0	852.5	24.7	12.9	47.8	990.7	074.5	144.4	1.000284
5500.0	837.8	23.7	12.4	49.1	976.0	073.5	144.4	1.000280
6000.0	823.2	22.7	11.9	50.4	963.1	072.2	140.0	1.000275
6500.0	809.0	21.7	11.3	51.7	949.9	071.0	131.7	1.000270
7000.0	794.9	20.6	10.7	53.1	936.6	069.8	119.4	1.000266
7500.0	781.1	19.9	10.1	53.3	923.1	068.9	72.5	1.000260
8000.0	767.5	19.8	9.4	51.1	907.3	067.7	17.1	1.000254
8500.0	753.9	18.7	8.5	51.6	893.0	067.4	0.4	1.000249
9000.0	740.6	17.5	7.6	52.2	882.9	066.9	12.6	1.000244
9500.0	727.5	16.3	6.7	52.7	871.1	064.5	36.7	1.000236
10000.0	714.7	15.2	5.7	53.3	859.3	063.1	38.1	1.000233
10500.0	702.0	14.0	4.8	53.9	847.8	061.7	18.6	1.000229
11000.0	689.4	12.7	4.4	57.2	830.3	060.2	17.0	1.000225
11500.0	676.9	11.4	4.1	60.9	825.0	058.0	30.9	1.000222
12000.0	664.6	10.0	3.7	64.7	813.9	057.1	30.4	1.000219
12500.0	652.6	8.7	3.2	68.5	803.0	055.5	37.1	1.000216
13000.0	640.8	7.4	2.7	72.2	792.2	053.9	06.1	1.000212
13500.0	629.2	6.1	2.2	76.0	781.0	052.4	74.7	1.000209
14000.0	617.6	4.9	1.0	75.6	770.3	051.0	85.3	1.000204
14500.0	606.2	3.9	-0.3	73.7	759.4	049.7	100.0	1.000199
15000.0	595.0	2.9	-1.7	71.8	748.3	048.3	108.2	1.000194
15500.0	583.9	1.7	-2.3	74.7	737.3	047.0	111.7	1.000190
16000.0	573.0	0.5	-2.3	81.3	727.0	045.3	107.3	1.000184
16500.0	562.2	-0.8	-2.7	86.6	716.6	044.1	100.1	1.000185
17000.0	551.6	-2.0	-3.6	84.8	706.3	042.0	97.3	1.000182
17500.0	541.2	-3.2	-4.4	91.0	690.2	041.1	95.7	1.000178
18000.0	530.8	-4.0	-5.6	88.8	683.1	040.1	88.1	1.000174
18500.0	520.7	-4.8	-6.7	86.6	674.1	039.0	80.1	1.000170
19000.0	510.7	-5.6	-7.8	84.4	663.4	037.0	67.6	1.000166
19500.0	501.0	-6.4	-8.9	82.2	652.0	035.0	50.4	1.000162
20000.0	491.3	-7.7	-10.0	83.6	643.4	033.7	31.4	1.000159
20500.0	481.8	-9.1	-11.1	85.4	634.4	033.1	46.0	1.000156
21000.0	472.4	-10.0	-13.0	78.9	624.3	032.5	37.3	1.000151
21500.0	463.2	-9.3	-15.8	59.0	610.6	033.2	23.1	1.000146
22000.0	454.1	-10.5	-16.4	61.8	601.4	031.9	9.2	1.000143
22500.0	445.2	-11.6	-16.9	64.5	592.2	030.5	39.5	1.000141
23000.0	436.5	-12.8	-17.6	67.2	583.2	029.1	1.7	1.000138
23500.0	427.9	-13.9	-18.2	69.9	574.3	027.7	4.4	1.000136

STATION ALTITUDE 410.40 F T MSL  
21 JULY 82 0915 MDT  
ASCENSION NO. 17

UNPLR AIR DATA  
2020220017  
1.0 30  
TABLE-6 cont'd

GEODETIC COORDINATES  
32.08497 LAT DEG  
106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	419.4	-14.9	-19.5	67.5	565.2	620.4	12.2	2.4	1.000133
24500.0	411.1	-15.5	-23.1	51.6	555.3	625.0	33.3	1.3	1.000129
25000.0	402.9	-16.6	-23.4	55.6	540.0	624.3	71.3	3.2	1.000127
25500.0	394.8	-17.3	-23.1	60.8	537.2	624.4	77.7	6.1	1.000125
26000.0	386.9	-17.9	-22.5	66.6	527.5	624.8	77.9	9.2	1.000123
26500.0	379.1	-18.6	-24.6	50.9	518.3	621.0	77.1	12.5	1.000120
27000.0	371.3	-19.7	-26.1	56.3	510.0	620.5	70.5	14.0	1.000118
27500.0	363.7	-20.8	-27.4	55.4	501.6	619.1	60.0	14.7	1.000116
28000.0	356.2	-21.9	-28.6	54.5	493.7	617.7	52.3	15.4	1.000113
28500.0	348.9	-23.1	-29.8	53.6	485.0	616.2	40.1	16.0	1.000111
29000.0	341.7	-24.2	-31.1	52.7	477.9	614.8	48.7	16.1	1.000109
29500.0	334.7	-25.3	-32.3	51.8	470.3	613.4	55.4	16.0	1.000107
30000.0	327.8	-26.5	-33.5	50.9	462.7	612.0	61.0	16.3	1.000105
30500.0	321.1	-27.6	-34.8	50.0	455.3	610.6	67.3	16.9	1.000103
31000.0	314.5	-28.7	-36.0	49.1	448.0	609.2	70.4	17.0	1.000102
31500.0	307.8	-29.9	-37.0	44.7	440.7	607.7	72.2	16.9	1.000100
32000.0	301.3	-31.1	-40.2	40.0	433.5	606.2	74.0	16.8	1.000098
32500.0	294.9	-32.3	-41.7	38.3	426.4	604.7	77.3	16.8	1.000096
33000.0	288.5	-33.5	-43.0	37.4	419.3	603.2	79.9	16.6	1.000094
33500.0	282.3	-34.7	-44.3	36.4	412.4	601.6	82.1	16.3	1.000093
34000.0	276.2	-35.9	-45.7	35.5	405.0	600.0	84.3	16.0	1.000091
34500.0	270.3	-37.2	-47.0	34.6	398.9	598.5	85.8	14.8	1.000089
35000.0	264.4	-38.4	-48.4	33.7	392.4	596.9	83.2	13.6	1.000088
35500.0	258.7	-39.7	-51.1	28.2**	386.0	595.3	80.9	12.4	1.000086
36000.0	253.0	-41.2	-60.8	9.8**	380.0	593.3	77.2	11.2	1.000085
36500.0	247.3	-42.5			373.0	591.0	70.9	9.8	1.000083
37000.0	241.7	-43.7			366.9	590.2	57.3	8.1	1.000082
37500.0	236.2	-44.8			360.4	588.7	38.0	7.2	1.000080
38000.0	230.9	-45.9			354.0	587.3	17.7	7.9	1.000079
38500.0	225.6	-47.1			347.7	585.8	2.0	9.4	1.000077
39000.0	220.5	-48.2			341.5	584.3	39.1	11.0	1.000076
39500.0	215.5	-49.3			335.4	582.0	39.3	12.3	1.000075
40000.0	210.6	-50.5			329.3	581.4	0.0	13.3	1.000073
40500.0	205.8	-51.6			323.0	579.9	0.0	13.1	1.000072
41000.0	201.2	-52.7			317.9	578.4	10.9	13.1	1.000071
41500.0	196.5	-53.6			311.8	577.2	21.0	11.5	1.000069
42000.0	191.9	-54.5			305.7	576.1	30.6	10.0	1.000068
42500.0	187.4	-55.3			299.7	575.0	57.0	9.7	1.000067
43000.0	183.0	-56.2			293.6	573.0	73.0	10.5	1.000065
43500.0	178.6	-57.4			288.4	572.3	86.9	11.9	1.000064

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32.88497 LAT DEG  
106.49714 LONG DEG

UPPER AIR DATA  
2020220017  
RW 30

TABLE-6 cont'd

STATION ALTITUDE 4010-40 FEET MSL  
21 JULY 62 0915 MDT  
ASCENSION NO. 17

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	174.4	-58.6		283.1	570.8	07.3	13.9	1.000063
44500.0	170.2	-59.8		278.0	569.0	07.0	15.8	1.000062
45000.0	166.1	-61.1		272.9	567.3	07.1	16.7	1.000061
45500.0	162.1	-62.3		267.8	565.7	06.3	17.1	1.000060
46000.0	158.2	-63.4		262.7	564.2	05.4	17.1	1.000059
46500.0	154.3	-64.6		257.7	562.6	04.7	16.3	1.000057
47000.0	150.5	-65.7		252.6	561.1	01.3	15.5	1.000056
47500.0	146.8	-66.2		247.1	560.5	92.3	15.1	1.000055
48000.0	143.2	-66.5		241.3	560.1	93.6	14.7	1.000054
48500.0	139.6	-66.8		235.7	559.7	93.3	14.3	1.000052
49000.0	136.2	-67.1		230.2	559.2	86.2	13.3	1.000051
49500.0	132.8	-67.4		224.9	558.8	78.1	12.6	1.000050
50000.0	129.5	-68.3		220.2	557.6	70.7	13.4	1.000049
50500.0	126.2	-69.1		215.6	556.5	65.7	15.5	1.000048
51000.0	123.1	-69.9		211.0	555.4	62.4	17.7	1.000047
51500.0	120.0	-69.8		205.6	555.5	61.9	20.1	1.000046
52000.0	117.0	-69.7		200.3	555.7	61.6	22.5	1.000045
52500.0	114.0	-69.6		195.2	555.8	61.4	23.0	1.000043
53000.0	111.2	-69.9		190.5	555.4	61.2	23.0	1.000042
53500.0	108.4	-70.3		186.2	554.8	61.0	23.0	1.000041
54000.0	105.6	-70.8		181.9	554.2	64.1	23.5	1.000041
54500.0	103.0	-71.0		177.5	553.8	68.0	24.3	1.000040
55000.0	100.4	-69.8		172.0	553.6	71.0	25.1	1.000038
55500.0	97.9	-68.9		167.0	550.7	77.9	25.7	1.000037
56000.0	95.5	-68.1		162.3	550.9	85.9	26.5	1.000036
56500.0	93.1	-67.3		157.6	550.9	93.2	27.8	1.000035
57000.0	90.8	-66.6		153.2	560.0	97.0	26.6	1.000034
57500.0	88.6	-65.8		148.6	561.0	102.2	24.6	1.000033
58000.0	86.4	-65.0		144.6	562.1	107.3	22.8	1.000032
58500.0	84.3	-64.2		140.5	563.2	109.0	21.4	1.000031
59000.0	82.2	-63.4		136.5	564.2	110.2	20.0	1.000030
59500.0	80.2	-62.7		132.7	565.2	112.1	18.7	1.000030
60000.0	78.2	-62.4		129.3	565.5	110.5	18.1	1.000029
60500.0	76.3	-62.2		126.1	565.9	108.0	17.7	1.000028
61000.0	74.5	-61.9		122.9	566.2	105.4	17.3	1.000027
61500.0	72.7	-61.7		119.7	566.5	100.7	18.0	1.000027
62000.0	70.9	-61.4		116.7	566.9	95.0	20.1	1.000026
62500.0	69.2	-61.4		113.9	566.9	90.4	22.3	1.000025
63000.0	67.5	-61.7		111.3	566.2	87.1	24.3	1.000025
63500.0	65.9	-62.0		108.7	566.2	87.9	25.9	1.000024



GEODETIC COORDINATES  
32.86497 LAT DEG  
106.49714 LONG DEG

UPPER AIR DATA  
2020220017  
NW 30

TABLE-6 cont'd

STATION ALTITUDE 4010.00 FEET 1 NSL  
21 JULY 82 0915 MDT  
ASCENSION NO. 17

GEOMETRIC ALTITUDE NSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND METER	WIND DATA DIRECTION (IN) SPEED KNOTS	INDEX OF REFRACTION
04000.0	64.3	-62.2		100.2	565.8	88.0	1.000024
04500.0	62.8	-62.5		103.6	565.4	88.0	1.000023
05000.0	61.2	-62.8		101.4	565.1	87.7	1.000023
05500.0	59.8	-62.5		96.8	565.4	87.3	1.000022
06000.0	58.3	-61.7		90.1	566.5	87.5	1.000021
06500.0	56.9	-60.8		93.4	567.7	88.5	1.000021
07000.0	55.6	-60.0		90.8	568.8	89.3	1.000020
07500.0	54.3	-59.1		88.3	570.0	90.2	1.000020
08000.0	53.0	-58.2		85.6	571.1	90.7	1.000019
08500.0	51.7	-57.4		83.5	572.3	91.1	1.000019
09000.0	50.5	-56.5		81.1	573.4	91.5	1.000018
09500.0	49.3	-56.0		79.0	574.1	91.9	1.000018
70000.0	48.1	-55.6		77.1	574.6	92.7	1.000017
70500.0	47.0	-55.2		75.1	575.1	93.6	1.000017
71000.0	45.9	-54.9		73.3	575.6	94.5	1.000016
71500.0	44.8	-54.5		71.4	576.0	95.4	1.000016
72000.0	43.8	-54.1		69.6	576.5	96.3	1.000016
72500.0	42.8	-53.8		67.9	577.0	97.2	1.000015
73000.0	41.8	-53.4		66.2	577.5		1.000015
73500.0	40.8	-53.1		64.6	578.0		1.000014
74000.0	39.8	-52.7		63.0	578.4		1.000014
74500.0	38.9	-52.3		61.4	578.9		1.000014

STATION ALTITUDE 4010.40 FEET MSL  
21 JULY 62  
ASCENSION NO. 17

MAJORITY LEVELS  
2020220017  
HW 30

TABLE-7

GEODETIC COORDINATES  
32.88497 LAT DEG  
106.49714 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	WIND DATA DIRECTION DEGREES (TN) SPEED KNOTS
850.0	5081.	24.6	40.	144.4 3.9
800.0	6617.	21.0	50.	125.1 5.1
750.0	8644.	18.3	52.	3.0 2.5
700.0	10571.	13.8	58.	14.9 1.3
650.0	12605.	8.4	69.	57.9 0.5
600.0	14759.	3.3	73.	100.6 0.2
550.0	17056.	-2.2	89.	97.1 5.7
500.0	19523.	-6.5	62.	55.8 7.0
450.0	22202.	-11.0	63.	3.4 4.1
400.0	25137.	-17.0	57.	74.5 4.1
350.0	28394.	-22.9	54.	46.9 15.9
300.0	32040.	-31.3	59.	75.1 10.8
250.0	36188.	-42.0		75.0 10.6
200.0	41026.	-53.0		12.0 13.1
175.0	43820.	-58.4		67.3 13.5
150.0	46944.	-65.9		91.0 15.5
125.0	50552.	-69.5		64.3 10.2
100.0	54906.	-69.6		71.9 25.2
80.0	59346.	-62.6		112.2 16.7
70.0	62056.	-61.3		92.6 21.1
60.0	65182.	-62.7		87.4 27.9
50.0	68927.	-50.2		91.7 33.8
40.0	73616.	-52.8		

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32-0927 LAT DEG  
106-40591 LON DEG

SIGHTING CANI LEVEL DATA  
2020290000

1-28  
TABLE-8

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 02  
ASCENSION NO. 80

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
384.5	3912.7	26.0	44.0
876.3	4161.7	12.8	51.0
859.5	4740.5	13.4	51.0
850.0	5061.6	14.7	51.0
825.0	5920.6	13.0	50.0
817.3	6189.9	12.5	51.0
784.1	7230.5	12.0	54.0
769.1	7925.5	11.4	50.0
700.0	10570.2	10.4	57.0
627.3	13570.4	9.2	74.0
592.1	15127.9	7.2	73.0
566.0	16284.3	4.9	95.0
534.3	17830.9	-1.9	92.0
516.1	18730.3	-4.7	97.0
500.0	19546.8	-5.4	98.0
490.4	20043.5	-7.4	97.0
477.1	20745.3	-8.2	97.0
468.9	21185.8	-9.4	80.0
453.1	22054.9	-10.5	67.0
427.2	23537.9	-10.3	73.0
413.6	24346.6	-13.8	40.0
400.0	25179.3	-14.3	50.0
350.3	28425.0	-15.6	59.0
336.7	29376.0	-23.5	40.0
300.0	32105.6	-24.8	29.0
260.3	35368.6	-31.1	24.0
250.0	36277.3	-38.6	
200.0	41155.7	-41.1	
161.9	45550.6	-52.1	
150.0	47093.7	-63.4	
123.3	50992.2	-64.3	
104.8	54165.4	-70.2	
102.7	54559.2	-72.1	
100.0	55081.9	-71.6	
80.4	59459.1	-68.7	
70.0	62282.2	-62.5	
61.2	65024.2	-62.3	
55.8	66925.2	-62.0	
50.0	69217.2	-58.9	
42.3	72521.6	-55.8	
		-51.4	

GEODETIC COORDINATES  
 32.89927 LAT DEG  
 106.40591 LONG DEG

SIGNI, ICAIT LEVEL DATA  
 2020230030  
 L-28

TABLE-8 cont'd

STATION ALTITUDE 3412.75 FEET MSL  
 21 JULY 82 1015 MDT  
 ASCENSION NO. 80

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
34.0	75072.7	-51.9	
34.6	77099.7	-47.8	

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 62 1015 MDT  
ASCENSION NO. 80

UPPER AIR DATA  
2020290060  
L-28  
TABLE-9

ULODETIC COORDINATES  
32-09927 LAT DEG  
106-40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	DIRECTION DEGREES (W)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3912.7	844.5	26.0	12.6	44.0	1023.5	076.0	0	0	1.000291
4000.0	841.8	25.4	13.0	46.3	1022.5	075.5	103.0	.3	1.000292
4500.0	800.7	25.0	14.2	51.0	1005.5	073.1	163.0	2.0	1.000293
5000.0	851.8	24.6	13.8	51.0	989.5	074.0	163.0	3.6	1.000288
5500.0	837.1	23.9	13.0	50.5	975.0	073.0	163.0	5.3	1.000282
6000.0	822.7	23.4	12.5	50.3	959.9	073.2	143.0	5.9	1.000277
6500.0	800.5	22.6	12.3	51.9	945.0	072.5	122.7	7.0	1.000273
7000.0	794.5	21.6	11.7	53.3	932.9	071.0	94.0	4.5	1.000268
7500.0	780.7	21.0	10.9	52.4	910.0	070.5	55.0	3.4	1.000262
8000.0	767.1	20.7	10.0	50.2	903.9	069.0	17.0	2.6	1.000255
8500.0	753.5	19.3	9.1	51.5	892.4	068.2	20.1	2.8	1.000250
9000.0	740.2	17.9	8.1	52.8	881.1	066.5	31.2	3.2	1.000245
9500.0	727.2	16.5	7.2	54.2	870.0	064.8	50.0	3.3	1.000240
10000.0	714.4	15.1	6.3	55.5	859.0	063.1	24.7	3.5	1.000235
10500.0	701.8	13.7	5.3	56.8	840.0	061.4	29.6	3.9	1.000230
11000.0	689.1	12.6	4.9	59.4	836.1	060.1	40.6	4.7	1.000227
11500.0	676.7	11.6	4.6	62.3	824.0	059.9	52.0	6.1	1.000223
12000.0	664.4	10.5	4.2	65.1	812.2	057.7	53.5	7.2	1.000220
12500.0	652.4	9.5	3.8	67.9	800.5	056.4	53.0	8.3	1.000217
13000.0	640.6	8.4	3.4	70.7	789.0	055.2	50.5	9.5	1.000213
13500.0	629.1	7.4	3.0	73.6	777.7	054.0	51.9	9.7	1.000210
14000.0	617.5	5.9	1.0	73.7	767.7	052.1	57.5	9.0	1.000204
14500.0	606.1	4.3	0.0	73.4	750.0	050.0	70.5	6.4	1.000199
15000.0	594.9	2.8	-1.5	73.1	740.5	048.5	100.0	4.3	1.000194
15500.0	583.8	1.4	-1.6	80.1	730.1	046.7	110.0	3.9	1.000192
16000.0	572.9	.1	-1.4	89.6	727.0	045.0	119.2	3.7	1.000190
16500.0	562.2	-1.0	-1.8	94.6	717.0	043.8	100.5	3.5	1.000187
17000.0	551.5	-2.0	-2.9	93.0	706.1	042.0	98.1	3.3	1.000183
17500.0	541.1	-3.0	-4.0	92.6	693.4	041.4	99.4	3.0	1.000179
18000.0	530.8	-3.9	-4.9	92.9	684.5	040.2	99.1	2.9	1.000175
18500.0	520.7	-4.9	-5.5	95.7	674.5	039.0	70.0	3.3	1.000172
19000.0	510.7	-6.1	-6.4	97.3	664.5	037.0	50.7	4.5	1.000168
19500.0	500.9	-7.3	-7.6	97.9	654.0	035.1	51.5	5.5	1.000164
20000.0	491.2	-8.1	-9.8	88.0	644.5	034.9	44.7	5.6	1.000159
20500.0	481.7	-9.0	-9.8	93.5	633.8	033.9	49.0	4.7	1.000157
21000.0	472.3	-10.0	-11.3	90.6	624.1	032.0	57.4	4.5	1.000153
21500.0	463.1	-10.4	-13.3	79.1	613.0	032.0	24.0	4.7	1.000149
22000.0	454.1	-10.3	-15.0	68.2	600.9	030.1	21.0	5.3	1.000144
22500.0	445.2	-11.4	-15.9	68.8	591.5	030.0	21.0	5.6	1.000142
23000.0	436.4	-12.5	-16.7	70.8	582.5	029.4	29.0	5.4	1.000139

STATION ALTITUDE 3412.75 FT ASL  
21 JULY 82  
ASCENSION NO. 80

UPLR AIR DATA  
2F20290000  
1-29  
TABLE-9 cont'd

GEODEIC COORDINATES  
32.39927 LAT DEG  
106.40591 LONG DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.8	-13.7	72.8	573.7	627.9	37.3	1.000136
24000.0	419.4	-14.1	58.7	563.3	627.4	48.0	1.000132
24500.0	411.1	-14.5	49.5	553.2	626.6	67.0	1.000129
25000.0	402.9	-15.3	54.3	543.0	625.0	85.6	1.000127
25500.0	394.8	-16.4	56.3	535.1	624.3	94.0	1.000125
26000.0	386.8	-17.6	56.8	526.0	623.0	96.4	1.000122
26500.0	379.0	-18.8	57.2	518.7	621.5	95.7	1.000120
27000.0	371.3	-20.0	57.7	510.7	620.0	93.7	1.000118
27500.0	363.8	-21.2	58.1	502.6	618.3	92.6	1.000116
28000.0	356.4	-22.5	58.6	495.0	617.0	91.6	1.000114
28500.0	349.2	-23.6	58.0	487.2	615.0	90.9	1.000112
29000.0	342.0	-24.3	51.1	478.5	614.7	90.0	1.000109
29500.0	334.9	-25.1	45.2	470.2	613.7	88.0	1.000107
30000.0	327.9	-26.2	42.1	462.5	612.3	88.0	1.000105
30500.0	321.1	-27.4	39.0	455.0	610.8	88.2	1.000103
31000.0	314.4	-28.5	35.9	447.6	609.4	87.1	1.000101
31500.0	307.8	-29.7	32.8	440.3	607.9	85.4	1.000099
32000.0	301.3	-30.9	29.7	433.2	606.3	82.4	1.000097
32500.0	294.9	-32.0	28.4	426.0	605.0	78.8	1.000096
33000.0	288.6	-33.2	27.6	418.6	603.6	78.0	1.000094
33500.0	282.3	-34.3	26.9	411.0	602.1	90.4	1.000092
34000.0	276.3	-35.5	26.1	404.9	600.7	83.0	1.000091
34500.0	270.3	-36.6	25.3	398.1	599.2	88.7	1.000089
35000.0	264.5	-37.8	24.6	391.4	597.7	89.2	1.000088
35500.0	258.8	-39.0	20.5**	384.9	596.2	89.1	1.000086
36000.0	253.1	-40.3	7.3**	378.7	594.4	86.9	1.000084
36500.0	247.5	-41.6		372.3	592.8	84.4	1.000083
37000.0	241.9	-42.7		365.7	591.4	76.1	1.000081
37500.0	236.4	-43.9		359.2	589.9	85.9	1.000080
38000.0	231.1	-45.0		352.6	588.3	51.2	1.000079
38500.0	225.8	-46.1		346.5	587.0	39.1	1.000077
39000.0	220.7	-47.2		340.4	585.5	30.7	1.000076
39500.0	215.7	-48.4		334.3	584.1	24.0	1.000074
40000.0	210.4	-49.5		328.4	582.6	30.0	1.000073
40500.0	206.1	-50.6		322.6	581.1	30.2	1.000072
41000.0	201.4	-51.7		316.9	579.7	42.2	1.000071
41500.0	196.7	-53.0		311.2	578.1	47.3	1.000069
42000.0	192.0	-54.3		305.7	576.4	46.0	1.000068
42500.0	187.5	-55.6		300.2	574.7	49.3	1.000067
43000.0	183.0	-56.8		294.8	573.0	33.6	1.000066

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3412.75 FEET MSL  
21 JULY 82 1015 MDT  
ASCENSION NO. 60

UPPER AIR DATA  
2020290000  
E-28

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

TABLE-9 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
43500.0	170.7	-58.1		289.5	571.5	50.0	1.000064
44000.0	174.4	-59.4		284.5	569.0	54.1	1.000063
44500.0	170.5	-60.7		279.2	567.0	69.1	1.000062
45000.0	160.2	-62.0		274.3	560.1	70.2	1.000061
45500.0	162.3	-63.3		269.4	564.4	70.9	1.000060
46000.0	150.5	-63.7		265.5	563.9	77.5	1.000059
46500.0	154.5	-64.0		257.2	563.5	84.2	1.000057
47000.0	150.7	-64.2		251.5	563.1	95.4	1.000056
47500.0	147.0	-64.9		245.9	562.2	104.0	1.000055
48000.0	143.3	-65.7		240.0	561.2	104.9	1.000054
48500.0	139.8	-66.4		235.5	560.1	105.2	1.000052
49000.0	130.3	-67.2		230.5	559.1	95.3	1.000051
49500.0	132.9	-67.9		225.6	558.1	84.0	1.000050
50000.0	129.6	-68.7		220.0	557.0	76.7	1.000049
50500.0	120.4	-69.5		216.2	556.0	73.6	1.000048
51000.0	125.5	-70.2		211.0	555.0	70.7	1.000047
51500.0	120.1	-70.5		206.5	554.6	69.4	1.000046
52000.0	117.1	-70.8		201.6	554.2	68.5	1.000045
52500.0	114.1	-71.1		196.8	553.0	67.9	1.000044
53000.0	111.2	-71.4		192.1	553.4	67.5	1.000043
53500.0	108.4	-71.7		187.5	552.9	69.0	1.000042
54000.0	105.7	-72.0		183.0	552.5	70.5	1.000041
54500.0	103.0	-71.7		178.1	553.0	73.5	1.000040
55000.0	100.4	-69.2		171.5	550.4	76.5	1.000038
55500.0	97.9	-68.1		166.4	557.9	80.0	1.000037
56000.0	95.5	-67.4		161.7	558.8	85.5	1.000036
56500.0	93.2	-66.7		157.2	559.8	89.6	1.000035
57000.0	90.9	-66.0		152.8	560.7	93.5	1.000034
57500.0	88.6	-65.3		148.0	561.7	96.7	1.000033
58000.0	86.5	-64.6		144.4	562.0	94.9	1.000032
58500.0	84.3	-63.9		140.4	563.0	92.7	1.000031
59000.0	82.3	-63.2		136.5	564.0	93.0	1.000030
59500.0	80.2	-62.5		132.7	565.4	95.4	1.000030
60000.0	78.3	-62.5		129.5	565.5	93.4	1.000029
60500.0	76.4	-62.4		126.5	565.5	93.7	1.000028
61000.0	74.5	-62.4		123.2	565.0	90.0	1.000027
61500.0	72.7	-62.4		120.2	565.0	83.5	1.000027
62000.0	71.0	-62.3		117.5	565.7	76.5	1.000026
62500.0	69.5	-62.3		114.4	565.7	70.2	1.000025
63000.0	67.6	-62.2		111.6	565.8	60.0	1.000025

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 52 1015 MDT  
ASLUSION NO. 80

UPLR AIR DATA  
2020290080  
L-28

GEODETIC COORDINATES  
32.0927 LAT DEG  
106.40591 LONG DEG

TABLE-9 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	63.9	-62.2		100.9	565.9	25.1	1.000024
64000.0	64.3	-62.1		100.2	565.9	25.7	1.000024
64500.0	64.8	-62.1		100.0	566.0	26.4	1.000023
65000.0	61.3	-62.0		101.1	560.1	26.4	1.000023
65500.0	59.8	-61.2		98.3	567.1	26.4	1.000022
66000.0	58.4	-60.4		95.0	566.2	26.8	1.000021
66500.0	57.0	-59.6		92.9	569.3	27.2	1.000021
67000.0	55.6	-58.8		90.4	570.4	27.7	1.000020
67500.0	54.3	-58.1		87.9	571.5	28.2	1.000020
68000.0	53.0	-57.4		85.0	572.2	28.7	1.000019
68500.0	51.7	-56.8		83.3	573.1	28.3	1.000019
69000.0	50.5	-56.1		81.1	574.0	27.9	1.000018
69500.0	49.3	-55.4		78.9	574.5	27.5	1.000018
70000.0	48.2	-54.8		76.9	575.7	27.5	1.000017
70500.0	47.1	-54.1		74.9	576.0	27.5	1.000017
71000.0	46.0	-53.4		72.9	577.5	27.2	1.000016
71500.0	44.9	-52.8		71.0	578.4	26.9	1.000016
72000.0	43.9	-52.1		69.1	579.2	26.7	1.000015
72500.0	42.8	-51.4		67.3	580.1	26.7	1.000015
73000.0	41.9	-51.5		65.6	580.0	26.8	1.000015
73500.0	40.9	-51.6		64.3	579.9	27.1	1.000014
74000.0	39.9	-51.7		62.0	579.0	27.3	1.000014
74500.0	39.0	-51.8		61.4	579.0	27.5	1.000014
75000.0	38.1	-51.9		60.0	579.5	27.7	1.000013
75500.0	37.3	-51.0		58.4	580.0		1.000013
76000.0	36.4	-50.0		56.6	581.4		1.000013
76500.0	35.6	-49.0		55.3	583.2		1.000012
77000.0	34.8	-48.0		53.0	584.0		1.000012



STATION ALTITUDE 3412.75 FEET MSL  
21 JULY 82  
ASCENSION NO. 80

MANDATORY LEVELS  
2120250000  
L-28  
TABLE-10

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

PRESSURE (GEOPOTENTIAL) MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	ALL. HUMID. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5058.	24.4	51.	163.0	3.8
800.0	6798.	22.0	53.	108.0	3.4
750.0	8631.	18.9	52.	23.7	2.9
700.0	10560.	13.5	57.	29.0	3.9
650.0	12596.	9.2	60.	52.5	8.6
600.0	14757.	3.5	73.	84.2	5.0
550.0	17053.	-2.1	93.	98.3	3.2
500.0	19520.	-7.4	98.	51.2	3.0
450.0	22195.	-10.7	60.	20.7	3.5
400.0	25138.	-15.6	53.	90.4	0.1
350.0	28394.	-23.5	59.	91.0	11.4
300.0	32042.	-31.1	29.	81.7	10.6
250.0	36198.	-41.1		85.9	11.7
200.0	41056.	-52.1		43.7	14.6
175.0	43847.	-59.2		63.5	12.3
150.0	46966.	-64.3		90.7	14.0
125.0	50577.	-69.8		71.7	13.5
100.0	54912.	-68.7		70.0	27.0
80.0	59364.	-62.5		93.2	20.9
70.0	62068.	-62.3		77.2	23.2
60.0	65195.	-61.3		91.2	20.4
50.0	68957.	-55.8		90.0	27.7
40.0	73678.	-51.7		95.1	27.3

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 82 1325 HDT  
ASCENSION, NO. 81

SIGNIFICANT LEVEL DATA  
2020290001  
L-23  
TABLE-11

GEODLTIC COORDINATES  
32.3927 LAT UEG  
106.40591 LONG UEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	TEMPERATURE DEWPOINT	REL. HUM.
MILLIBARS	MSL FEET	DEGREES	DEGREES	PERCENT
883.5	3912.7	35.3	10.0	38.0
877.9	4102.3	32.7	17.5	40.0
850.0	5054.3	29.0	15.2	43.0
761.1	8248.5	21.7	9.0	46.0
700.0	10610.9	15.5	0.0	53.0
614.5	14184.7	5.6	1.2	73.0
581.5	15662.4	1.9	.7	92.0
570.6	16163.9	.0	-.7	95.0
554.7	16908.1	-1.4	-1.0	97.0
500.0	19611.0	-6.0	-3.8	94.0
476.7	20837.5	-8.0	-10.8	80.0
454.4	22057.1	-10.9	-12.3	89.0
434.7	23177.1	-11.8	-16.3	69.0
400.1	24883.4	-14.8	-21.2	58.0
400.0	25260.3	-15.2	-22.4	54.0
390.1	25882.2	-16.6	-24.3	51.0
385.5	26175.4	-17.1	-29.5	33.0
371.7	27071.9	-19.2	-28.0	43.0
358.3	27967.3	-21.4	-33.9	31.0
351.3	28445.6	-22.1	-29.9	49.0
330.0	29948.9	-25.9	-31.7	58.0
306.7	31680.8	-30.0	-36.8	51.0
300.0	32198.5	-30.4	-39.1	42.0
294.3	32646.7	-31.4	-44.8	25.0
270.7	34576.3	-36.3	-50.0	21.0
257.6	35683.7	-39.8	-53.2	22.0
250.0	36374.8	-40.2		
211.7	40035.8	-49.8		
200.0	41252.9	-52.9		
178.3	43666.5	-58.0		
150.0	47208.8	-63.8		
136.0	49171.5	-67.7		
110.2	53298.3	-72.5		
100.0	55191.6	-70.4		
95.5	56100.9	-67.3		
77.6	60249.7	-65.5		
70.0	62336.0	-62.2		
62.3	64737.6	-58.0		
56.8	66666.0	-57.0		
50.0	69338.7	-56.1		

GEODETIC COORDINATES  
 32.34927 LAT DEG  
 106.40591 LON DEG

SIGNIFICANT LEVEL DATA  
 2020290081  
 1-28

TABLE-11 cont'd

STATION ALTITUDE 3912.75 FEET MSL  
 21 JULY 62  
 ASCENSION NO. 81 1325 MDT

PRESSURE	GEOMETRIC	TEMPERATURE	REL. HUM.
	ALTITUDE	AIR DEWPOINT	PERCENT
MILLIBARS	MSL FEET	DEGREES	CENTIGRADE
43.5	7285.5	-53.0	

GEODETIC COORDINATES  
32.09927 LAT DEG  
106.40591 LONG DEG

UPPER AIR DATA  
2020290001  
L-28  
TABLE-12

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 82 1325 MDT  
ASCENSION NO. 81

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3912.7	803.5	35.3	18.8	38.0	988.5	687.4	0.0	0.0	1.000307
4000.0	860.9	34.1	18.1	38.9	989.8	686.0	147.9	.4	1.000304
4500.0	860.1	31.2	16.4	41.3	983.4	686.4	147.9	2.6	1.000296
5000.0	851.6	29.2	15.3	42.8	973.0	686.1	147.9	4.8	1.000289
5500.0	837.0	28.0	14.4	43.4	961.1	676.0	147.9	7.0	1.000283
6000.0	822.6	26.8	13.5	43.9	948.5	677.2	140.0	7.6	1.000277
6500.0	808.5	25.7	12.7	44.4	930.1	675.8	143.5	7.5	1.000271
7000.0	794.7	24.6	11.8	44.8	923.6	674.4	137.9	6.0	1.000265
7500.0	781.1	23.4	10.9	45.3	911.7	673.0	120.5	4.1	1.000259
8000.0	767.7	22.3	10.0	45.8	899.0	671.0	94.2	2.4	1.000254
8500.0	754.3	21.0	9.2	46.7	886.0	670.2	64.5	3.3	1.000249
9000.0	741.1	19.7	8.5	48.2	870.5	668.6	54.0	4.7	1.000244
9500.0	728.1	18.4	7.7	49.7	863.2	667.0	03.0	5.3	1.000240
10000.0	715.3	17.1	6.9	51.2	854.0	665.5	99.5	5.9	1.000235
10500.0	702.8	15.8	6.2	52.7	843.0	663.9	73.0	5.9	1.000231
11000.0	690.1	14.4	5.6	55.2	831.9	662.3	73.9	6.2	1.000227
11500.0	677.7	13.0	5.0	58.0	820.9	660.7	71.3	6.8	1.000223
12000.0	665.4	11.7	4.3	60.8	810.1	659.0	66.3	7.0	1.000219
12500.0	653.4	10.3	3.7	63.6	799.5	657.4	60.0	7.2	1.000216
13000.0	641.6	8.9	3.0	66.4	789.0	655.7	50.1	8.2	1.000212
13500.0	630.0	7.5	2.2	69.2	778.7	654.1	54.3	9.0	1.000208
14000.0	618.7	6.1	1.4	72.0	768.5	652.4	50.0	9.4	1.000204
14500.0	607.5	4.8	1.1	77.1	758.0	650.9	55.3	8.7	1.000201
15000.0	596.1	3.6	1.0	83.5	747.3	649.4	52.0	7.3	1.000199
15500.0	585.0	2.3	.8	89.9	736.8	647.9	43.0	5.2	1.000197
16000.0	574.1	.6	-.2	94.0	727.7	646.9	21.0	3.4	1.000193
16500.0	563.4	-.6	-1.2	95.9	717.5	646.3	34.2	2.8	1.000188
17000.0	552.7	-1.6	-2.0	96.9	706.4	645.2	32.0	2.9	1.000185
17500.0	542.2	-2.4	-2.9	96.3	695.3	642.1	34.0	3.2	1.000180
18000.0	531.9	-3.3	-3.8	95.8	684.3	641.1	1.4	3.6	1.000176
18500.0	521.8	-4.1	-4.8	95.2	673.5	640.0	18.9	3.8	1.000173
19000.0	511.9	-5.0	-5.7	94.7	662.9	638.9	35.9	4.3	1.000169
19500.0	502.1	-5.8	-6.6	94.1	652.5	637.9	31.4	5.2	1.000165
20000.0	492.5	-6.6	-8.1	89.6	642.1	636.0	00.1	5.8	1.000161
20500.0	483.0	-7.4	-9.7	93.9	631.8	635.0	00.0	5.9	1.000156
21000.0	473.7	-8.4	-11.0	81.2	621.9	634.0	71.2	5.1	1.000153
21500.0	464.5	-9.6	-11.6	84.9	612.0	633.1	79.2	3.7	1.000150
22000.0	455.4	-10.8	-12.3	88.6	603.5	631.7	84.0	2.7	1.000148
22500.0	446.5	-11.3	-13.8	81.1	592.9	631.0	91.4	1.8	1.000144
23000.0	437.8	-11.7	-15.6	72.2	582.3	630.5	101.3	1.5	1.000140

STATION ALTITUDE 3942.75 F T MSL  
21 JULY 62 1325 NOT  
ASCENDING NO. 81

UPLR AIR DATA  
26202900001  
L-20  
TABLE-12 cont'd

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
23500.0	429.1	-12.4	-17.2	66.9	572.5	629.0	113.0	1.000136
24000.0	420.7	-13.2	-18.6	65.7	565.1	620.5	110.5	1.000133
24500.0	412.4	-14.1	-20.1	60.5	554.0	627.4	103.7	1.000130
25000.0	404.2	-14.9	-21.6	56.8	544.7	620.5	96.0	1.000128
25500.0	396.2	-15.7	-23.1	52.8	535.7	625.5	90.0	1.000125
26000.0	388.2	-16.8	-24.2	43.8	527.2	624.0	100.4	1.000122
26500.0	380.4	-17.9	-29.1	36.6	518.9	622.0	102.0	1.000119
27000.0	372.8	-19.0	-28.6	42.2	510.6	621.2	104.7	1.000117
27500.0	365.2	-20.3	-31.0	37.3	502.9	619.7	102.9	1.000115
28000.0	357.8	-21.4	-33.6	32.2	495.0	618.2	100.0	1.000112
28500.0	350.5	-22.2	-29.9	49.3	485.4	617.5	106.7	1.000111
29000.0	343.3	-23.5	-30.5	52.3	478.8	615.7	110.2	1.000110
29500.0	336.2	-24.8	-31.1	55.3	471.5	614.1	106.1	1.000108
30000.0	329.5	-26.0	-31.8	57.8	464.0	612.0	105.5	1.000106
30500.0	322.4	-27.2	-33.3	55.8	456.5	611.1	100.7	1.000104
31000.0	315.7	-28.4	-30.8	53.8	449.1	609.0	97.1	1.000102
31500.0	309.1	-29.6	-36.3	51.7	441.9	608.1	93.0	1.000100
32000.0	302.6	-30.2	-38.2	45.5	433.8	607.5	89.0	1.000098
32500.0	296.2	-31.1	-42.7	30.6	426.1	606.2	80.9	1.000096
33000.0	289.8	-32.3	-45.9	24.3	419.2	604.0	72.9	1.000094
33500.0	283.6	-33.6	-47.4	23.2	412.4	603.0	64.9	1.000092
34000.0	277.5	-34.8	-48.9	22.2	405.7	601.4	61.5	1.000091
34500.0	271.6	-36.1	-50.4	21.2	399.1	599.0	61.0	1.000089
35000.0	265.7	-37.6	-51.6	21.4	393.0	597.9	59.0	1.000088
35500.0	259.9	-39.2	-52.8	21.8	387.0	595.9	58.5	1.000087
36000.0	254.2	-40.0	-58.5	11.9**	379.6	594.9	58.2	1.000085
36500.0	248.6	-40.5			372.5	594.2	58.1	1.000083
37000.0	243.0	-41.8			366.0	592.5	61.5	1.000082
37500.0	237.5	-43.2			359.8	590.0	65.0	1.000080
38000.0	232.2	-44.5			353.7	589.1	60.0	1.000079
38500.0	227.0	-45.8			347.6	587.4	68.1	1.000077
39000.0	221.9	-47.1			341.9	585.0	71.2	1.000076
39500.0	216.9	-48.4			336.2	584.0	74.0	1.000075
40000.0	212.0	-49.7			330.0	582.5	60.1	1.000074
40500.0	207.2	-51.0			324.6	580.7	65.7	1.000072
41000.0	202.4	-52.3			319.2	579.0	90.4	1.000071
41500.0	197.7	-53.4			313.4	577.5	94.5	1.000070
42000.0	193.0	-54.5			307.5	576.1	95.9	1.000068
42500.0	188.0	-55.5			301.7	574.7	96.0	1.000067
43000.0	184.0	-56.6			296.1	573.5	93.1	1.000066

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

UPPER AIR DATA  
2020290081  
L-28

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 62 1325 MDT  
ASCENSION NO. 81

TABLE-12 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION WIND DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	179.7	-57.6		290.5	571.9	97.3	12.7	1.000065
44000.0	175.4	-58.5		284.8	570.7	74.6	13.0	1.000063
44500.0	171.2	-59.4		279.0	569.8	75.0	13.7	1.000062
45000.0	167.1	-60.2		273.3	568.5	79.2	14.8	1.000061
45500.0	163.0	-61.0		267.7	567.4	83.0	15.9	1.000060
46000.0	159.1	-61.8		262.3	566.3	87.0	16.0	1.000058
46500.0	155.3	-62.6		257.0	565.2	92.5	16.2	1.000057
47000.0	151.5	-63.5		251.7	564.1	96.2	16.2	1.000056
47500.0	147.8	-64.4		246.7	562.9	99.6	16.3	1.000055
48000.0	144.2	-65.4		241.8	561.8	97.5	14.8	1.000054
48500.0	140.6	-66.4		236.9	560.2	94.4	13.3	1.000053
49000.0	137.2	-67.4		232.2	558.9	87.9	11.2	1.000052
49500.0	133.7	-68.1		227.2	557.9	78.4	9.5	1.000051
50000.0	130.4	-68.7		222.1	557.1	76.0	10.9	1.000049
50500.0	127.1	-69.2		217.1	556.3	75.7	12.9	1.000048
51000.0	123.9	-69.8		212.3	555.5	76.3	17.0	1.000047
51500.0	120.8	-70.4		207.5	554.7	76.9	21.8	1.000046
52000.0	117.7	-71.0		202.9	553.9	77.4	24.8	1.000045
52500.0	114.8	-71.6		198.4	553.1	78.0	27.0	1.000044
53000.0	111.9	-72.2		193.9	552.3	77.0	27.8	1.000043
53500.0	109.1	-72.3		189.1	552.2	77.1	27.3	1.000042
54000.0	106.3	-71.7		183.6	552.9	77.3	27.1	1.000041
54500.0	103.6	-71.2		178.7	553.7	79.0	27.0	1.000040
55000.0	101.0	-70.6		173.7	554.4	81.0	27.2	1.000039
55500.0	98.5	-69.3		168.3	555.2	89.2	28.3	1.000037
56000.0	96.0	-67.6		162.7	556.5	95.9	29.8	1.000036
56500.0	93.6	-67.1		156.3	559.2	97.0	28.9	1.000035
57000.0	91.3	-66.9		154.2	559.3	99.4	27.8	1.000034
57500.0	89.0	-66.7		150.2	559.8	98.3	25.3	1.000033
58000.0	86.8	-66.5		146.4	560.1	95.0	22.2	1.000032
58500.0	84.7	-66.3		142.6	560.4	92.2	20.1	1.000031
59000.0	82.6	-66.0		138.9	560.7	92.2	19.9	1.000030
59500.0	80.6	-65.8		135.4	560.9	92.0	19.9	1.000029
60000.0	78.6	-65.6		131.9	561.2	91.0	21.6	1.000028
60500.0	76.6	-65.1		128.3	561.9	90.2	23.3	1.000027
61000.0	74.8	-64.3		124.7	563.0	90.9	25.1	1.000026
61500.0	73.0	-63.5		121.2	564.1	91.0	26.9	1.000025
62000.0	71.2	-62.7		117.8	565.1	95.3	28.2	1.000024
62500.0	69.4	-61.9		114.5	566.2	101.0	29.2	1.000023
63000.0	67.8	-61.0		111.3	567.4	105.2	30.1	1.000022

STATION ALTITUDE 3412.75 FL. 1 MSL  
21 JULY 62 1325 MDT  
ASCENSION NO. 81

UNPLD AIR DATA  
2020290001  
E-28

TABLE-12 cont'd

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
63500.0	60.2	-60.2		108.2	508.0	106.4	29.9	1.000024
64000.0	64.6	-59.3		105.2	569.7	107.6	29.7	1.000023
64500.0	63.0	-58.4		102.2	570.9	106.5	29.1	1.000023
65000.0	61.5	-57.9		99.6	571.0	104.2	28.5	1.000022
65500.0	60.1	-57.6		97.1	572.0	102.1	27.8	1.000022
66000.0	58.6	-57.3		94.7	572.3	101.2	26.7	1.000021
66500.0	57.3	-57.1		92.3	572.6	100.3	25.7	1.000021
67000.0	55.9	-56.9		90.0	572.9	99.1	25.8	1.000020
67500.0	54.6	-56.7		87.9	573.1	97.6	26.5	1.000020
68000.0	53.3	-56.6		85.7	573.4	96.7	27.3	1.000019
68500.0	52.0	-56.4		83.6	573.6	96.1	27.7	1.000019
69000.0	50.8	-56.2		81.6	573.8	95.5	28.1	1.000018
69500.0	49.6	-55.9		79.6	574.2	95.2	27.4	1.000018
70000.0	48.5	-55.4		77.5	574.9	95.1		1.000017
70500.0	47.3	-54.9		75.5	575.0			1.000017
71000.0	46.2	-54.4		73.6	576.3			1.000016
71500.0	45.1	-53.8		71.7	576.4			1.000016
72000.0	44.1	-53.3		69.9	577.0			1.000016

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 62  
ASCENSION NO. 81 1325 YDT

MANDATORY LEVELS  
2020290001  
L-28  
TABLE-13

GEODETIC COORDINATES  
32.69927 LAT DEG  
106.400591 LONG DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	WIND DATA	
				DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	5051.	29.0	43.	147.9	5.0
800.0	6812.	25.0	45.	140.3	6.5
750.0	8659.	20.6	47.	60.2	3.7
700.0	10601.	15.5	53.	73.8	0.0
650.0	12646.	9.9	64.	59.1	7.5
600.0	14809.	4.0	81.	53.7	7.8
550.0	17110.	-1.0	97.	332.9	3.0
500.0	19584.	-6.0	94.	53.9	5.4
450.0	22269.	-11.1	85.	87.9	2.2
400.0	25218.	-15.2	54.	94.4	9.0
350.0	28483.	-22.3	50.	106.9	14.1
300.0	32134.	-30.4	42.	80.3	17.0
250.0	36295.	-40.2		58.2	14.4
200.0	41153.	-52.9		92.4	18.9
175.0	43941.	-58.6		79.1	13.1
150.0	47081.	-63.8		97.5	10.2
125.0	50691.	-69.6		70.0	15.2
100.0	55021.	-70.4		84.3	27.5
80.0	59441.	-65.8		91.0	20.3
70.0	62122.	-62.2		98.9	29.8
60.0	65286.	-57.6		102.1	27.8
50.0	69077.	-56.1		95.3	27.8

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.



STATION ALTITUDE 4010.40 FEET MSL  
21 JULY 62 1352 PDT  
ASCESSION NO. 19

SIGNIFICANT LEVEL DATA  
202020019  
1 W 30  
TABLE-14

GEODETIC COORDINATES  
32.00497 LAT DEG  
106.49714 LON DEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE	REL. HUM.
MILLIBARS	MSL FEET	AIR DEGREE CENTIGRADE	PERCENT
680.7	4010.4	35.0	0.7
850.0	5058.9	30.1	9.1
772.3	7830.0	22.7	8.4
700.0	10612.8	15.3	3.0
570.3	16174.7	.0	-0.0
543.4	17447.1	-1.3	-4.0
500.0	19517.6	-5.0	-3.9
458.7	21820.2	-9.8	-14.0
441.2	22816.7	-10.3	-17.0
420.0	24022.2	-13.3	-24.0
400.0	25274.3	-16.0	-21.0
376.0	26748.8	-18.6	-30.5
360.6	27822.0	-21.3	-26.7
348.7	28633.9	-23.3	-33.0
300.0	32200.4	-31.4	-30.7
283.5	33511.8	-34.3	-47.0
275.3	34185.5	-36.1	-50.0
250.0	36365.9	-41.3	
200.0	41234.6	-52.8	
193.6	41822.8	-55.1	
188.7	42462.0	-55.4	
150.0	47185.9	-64.6	
120.5	50573.1	-70.1	
112.9	52793.0	-72.2	
109.9	53316.9	-71.5	
106.1	54003.4	-69.9	
100.0	55169.4	-69.0	
70.0	62319.9	-62.0	
50.0	69291.4	-56.0	
30.2	74448.2	-52.5	

GEOMETRIC COORDINATES  
32.00497 LAT DEG  
106.49714 LONG DEG

UNPLD AIR DATA  
2020220019  
14W 30  
TABLE-15

STATION ALTITUDE 4010-40 FEET MSL  
21 JULY 62 1352 MDT  
ASCENSION NO. 19

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) SPEED (KNOTS)	INDEX OF REFRACTION
4010.4	880.7	35.0	20.0	990.0	685.5	0.0	1.000260
4500.0	860.2	32.7	23.3	981.6	683.1	117.5	1.000265
5000.0	851.7	30.4	26.6	972.5	680.5	117.5	1.000264
5500.0	837.2	28.9	29.1	960.4	675.9	117.5	1.000262
6000.0	822.8	27.6	31.4	948.0	671.4	117.5	1.000260
6500.0	808.8	26.3	33.7	935.9	673.9	117.5	1.000257
7000.0	794.9	24.9	36.1	924.0	674.4	122.0	1.000255
7500.0	781.3	23.6	38.4	912.2	672.9	125.5	1.000252
8000.0	767.8	22.3	40.4	900.0	671.4	135.0	1.000248
8500.0	754.4	20.9	41.4	889.0	669.8	145.0	1.000243
9000.0	741.1	19.6	42.5	877.0	668.2	155.0	1.000238
9500.0	728.1	18.3	43.6	866.3	666.0	165.0	1.000234
10000.0	715.4	16.9	44.7	855.2	665.0	175.0	1.000229
10500.0	702.8	15.6	45.8	844.2	663.4	185.0	1.000225
11000.0	690.1	14.2	46.9	832.0	661.9	195.0	1.000222
11500.0	677.5	12.9	53.7	821.5	660.3	205.0	1.000219
12000.0	665.1	11.5	58.0	810.4	658.7	215.0	1.000217
12500.0	653.0	10.1	62.3	799.5	657.1	225.0	1.000215
13000.0	641.1	8.7	66.6	788.7	655.3	235.0	1.000212
13500.0	629.4	7.4	70.9	778.2	653.9	245.0	1.000208
14000.0	617.9	6.0	75.2	767.8	652.3	255.0	1.000205
14500.0	606.6	4.6	79.5	757.0	650.8	265.0	1.000202
15000.0	595.5	3.2	83.9	747.5	649.0	275.0	1.000199
15500.0	584.7	1.9	88.2	737.7	647.3	285.0	1.000195
16000.0	574.0	.5	92.5	727.9	645.7	295.0	1.000192
16500.0	563.3	-3.3	90.9	718.7	644.0	305.0	1.000187
17000.0	552.7	-8.8	86.2	704.7	644.0	315.0	1.000182
17500.0	542.3	-14.4	81.8	693.0	643.2	325.0	1.000178
18000.0	532.0	-20.2	80.0	682.1	642.2	335.0	1.000173
18500.0	521.9	-26.1	78.1	671.4	641.1	345.0	1.000169
19000.0	512.0	-32.9	76.3	660.8	640.0	355.0	1.000165
19500.0	502.3	-39.8	74.4	650.5	639.0	365.0	1.000162
20000.0	492.6	-46.8	73.5	640.5	637.7	375.0	1.000158
20500.0	483.1	-53.9	72.8	630.8	636.3	385.0	1.000155
21000.0	473.8	-60.0	72.1	621.3	635.0	395.0	1.000151
21500.0	464.6	-67.1	71.4	611.9	633.8	405.0	1.000148
22000.0	455.6	-74.2	68.2	601.9	632.6	415.0	1.000145
22500.0	446.7	-81.3	60.1	590.9	632.3	425.0	1.000141
23000.0	438.0	-88.4	52.7	580.8	631.4	435.0	1.000137
23500.0	429.4	-95.5	46.5	572.2	629.9	445.0	1.000134

STATION ALTITUDE 4010.40 FT. MSL  
21 JULY 52 1352 PDT  
ASCENSION NO. 19

UPPER AIR DATA  
2020220015  
11W 30

GEODETIC COORDINATES  
32-58497 LAT DEG  
106-49714 LONG DEG

TABLE-15 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL-HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TW)	SPEED KNOTS	INDEX OF REFRACTION
4000.0	421.0	-13.2	40.3	563.8	628.3	93.1	2.0	1.000131
4500.0	412.6	-14.3	48.4	554.9	627.0	94.2	3.3	1.000129
5000.0	404.4	-15.4	57.2	546.1	625.7	94.0	4.7	1.000128
5500.0	396.4	-16.4	57.7	537.3	624.5	94.3	6.8	1.000125
6000.0	388.4	-17.3	48.2	528.4	623.4	94.4	8.9	1.000122
6500.0	380.6	-18.2	38.7	519.7	622.3	94.7	10.3	1.000119
7000.0	372.9	-19.2	38.0	511.4	620.9	95.2	11.6	1.000117
7500.0	365.4	-20.5	45.9	503.5	619.4	95.5	11.6	1.000115
8000.0	358.0	-21.7	48.1	495.7	617.9	103.6	11.7	1.000114
8500.0	350.6	-23.0	40.1	486.0	616.3	106.5	11.5	1.000111
9000.0	343.4	-24.1	40.2	480.2	614.9	108.2	11.4	1.000109
9500.0	336.2	-25.3	43.1	472.3	613.5	105.3	11.4	1.000107
10000.0	329.2	-26.4	46.0	464.6	612.1	103.2	11.6	1.000105
10500.0	322.3	-27.5	49.0	457.0	610.7	102.4	12.0	1.000104
11000.0	315.6	-28.7	51.9	449.5	609.2	101.4	12.4	1.000102
11500.0	309.0	-29.8	54.9	442.2	607.8	100.5	12.8	1.000100
12000.0	302.5	-30.9	57.8	435.0	606.4	97.7	12.9	1.000099
12500.0	296.1	-32.1	51.5	427.0	605.0	91.5	12.7	1.000097
13000.0	289.8	-33.2	38.9	420.0	603.6	84.2	12.5	1.000095
13500.0	283.6	-34.3	26.3	413.0	602.2	72.9	12.2	1.000093
14000.0	277.5	-35.6	23.1	407.0	600.9	61.3	12.4	1.000091
14500.0	271.5	-36.9	18.8**	400.2	599.5	60.0	11.8	1.000089
15000.0	265.6	-38.0	13.8**	393.5	597.4	58.7	11.3	1.000088
15500.0	259.8	-39.2	8.7**	386.8	595.6	62.0	10.9	1.000086
16000.0	254.1	-40.4	3.7**	380.3	594.3	66.9	10.8	1.000085
16500.0	248.5	-41.6		373.6	592.8	68.3	11.2	1.000083
17000.0	242.8	-42.8		367.2	591.5	67.2	12.1	1.000082
17500.0	237.3	-44.0		360.0	589.8	67.7	12.9	1.000080
18000.0	232.0	-45.2		354.4	588.2	69.1	13.7	1.000079
18500.0	226.7	-46.3		348.2	586.7	72.2	14.3	1.000078
19000.0	221.6	-47.5		342.1	585.2	76.9	14.8	1.000076
19500.0	216.5	-48.7		336.1	583.6	82.5	15.6	1.000075
20000.0	211.6	-49.9		330.2	582.1	90.9	17.0	1.000074
20500.0	206.8	-51.1		324.5	580.0	98.0	18.7	1.000072
21000.0	202.2	-52.2		318.8	579.0	100.3	17.9	1.000071
21500.0	197.5	-53.7		313.5	577.1	102.6	17.2	1.000070
22000.0	192.9	-55.1		308.2	575.2	96.4	14.1	1.000069
22500.0	188.4	-55.5		301.4	574.0	81.2	10.7	1.000067
23000.0	183.8	-56.4		295.5	573.5	65.3	10.1	1.000066
23500.0	179.4	-57.4		289.7	572.2	50.4	11.3	1.000065

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.0 F ET MSL  
21 JULY 62 1352 MDT  
ASCENSION NO. 19

UPPER AIR DATA  
2020220019  
14M 30  
TABLE-15 cont'd

GEODLTIC COORDINATES  
32.88497 LAT DEG  
106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (111)	SPEED KNOTS	INDEX OF REFRACTION
44000.0	175.1	-58.4		284.1	570.9	55.2	12.5	1.000063
44500.0	170.9	-59.4		278.5	564.6	62.3	13.7	1.000062
45000.0	166.8	-60.3		273.1	558.3	68.3	14.9	1.000061
45500.0	162.8	-61.3		267.7	551.0	74.6	15.1	1.000060
46000.0	158.9	-62.3		262.5	543.7	80.6	15.6	1.000058
46500.0	155.1	-63.3		257.4	536.4	85.5	16.2	1.000057
47000.0	151.4	-64.2		252.4	529.1	89.9	17.0	1.000056
47500.0	147.6	-65.1		247.2	521.9	92.9	16.2	1.000055
48000.0	144.0	-65.9		242.0	514.8	96.1	15.1	1.000054
48500.0	140.4	-66.7		237.0	507.7	97.0	12.7	1.000053
49000.0	136.9	-67.5		232.0	500.6	96.0	9.4	1.000052
49500.0	133.5	-68.4		227.1	493.5	82.1	8.1	1.000051
50000.0	130.2	-69.2		222.4	486.4	80.6	10.2	1.000050
50500.0	127.0	-70.0		217.7	479.3	51.0	13.4	1.000048
51000.0	123.8	-70.5		212.6	472.2	58.9	18.0	1.000047
51500.0	120.6	-71.0		207.9	465.1	63.1	22.8	1.000046
52000.0	117.6	-71.4		203.1	458.0	68.6	24.0	1.000045
52500.0	114.6	-71.9		198.4	450.9	74.1	25.2	1.000044
53000.0	111.7	-71.9		193.4	443.8	75.7	25.8	1.000043
53500.0	108.9	-71.1		187.7	436.7	76.0	26.1	1.000042
54000.0	106.1	-69.9		181.9	429.6	77.7	27.0	1.000041
54500.0	103.5	-69.8		177.2	422.5	80.6	28.8	1.000039
55000.0	100.9	-69.6		172.7	415.4	83.3	30.3	1.000038
55500.0	98.4	-69.2		168.1	408.3	86.3	30.8	1.000037
56000.0	95.9	-68.7		163.5	401.2	89.3	31.4	1.000036
56500.0	93.6	-68.2		159.0	394.1	90.3	30.1	1.000035
57000.0	91.3	-67.7		154.7	387.0	91.2	28.5	1.000034
57500.0	89.0	-67.1		150.5	379.9	92.0	26.5	1.000034
58000.0	86.8	-66.6		146.4	372.8	92.6	24.1	1.000033
58500.0	84.7	-66.1		142.5	365.7	93.3	21.9	1.000032
59000.0	82.6	-65.5		138.6	358.6	94.3	21.4	1.000031
59500.0	80.6	-65.0		134.8	351.5	95.4	20.9	1.000030
60000.0	78.6	-64.5		131.2	344.4	96.4	21.3	1.000029
60500.0	76.7	-63.9		127.6	337.3	97.3	21.9	1.000028
61000.0	74.8	-63.4		124.2	330.2	98.2	22.1	1.000028
61500.0	72.9	-62.9		120.8	323.1	99.0	21.6	1.000027
62000.0	71.1	-62.3		117.5	316.0	100.9	21.3	1.000026
62500.0	69.4	-61.8		114.4	308.9	102.2	21.5	1.000025
63000.0	67.7	-61.4		111.3	301.8	111.4	21.9	1.000025
63500.0	66.1	-61.0		108.6	294.7	111.7	22.5	1.000024

GEODETIC COORDINATES  
32.88497 LAT DEG  
106.49714 LON DEG

UPPER AIR DATA  
2020220019  
NW 30

TABLE-15 cont'd

STATION ALTITUDE 4010.40 FT. 1 MSL  
21 JULY 62 1352 MDT  
ASCENSION NO. 19

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND ANOIS	WIND DIRECTION (DEGREES (TN))	WIND SPEED KNOTS	INDEX OF REFRACTION
64000.0	64.5	-60.6		105.8	568.0	111.6	23.0	1.000024
64500.0	63.0	-60.1		103.0	568.6	107.6	23.6	1.000023
65000.0	61.5	-59.7		100.4	569.2	101.1	24.4	1.000022
65500.0	60.0	-59.3		97.8	565.8	95.0	25.5	1.000022
66000.0	58.6	-58.8		95.3	570.3	92.1	26.7	1.000021
66500.0	57.2	-58.4		92.8	570.9	89.5	28.0	1.000021
67000.0	55.8	-58.0		90.4	571.5	88.6	28.4	1.000020
67500.0	54.5	-57.5		86.1	572.0	89.6	28.1	1.000020
68000.0	53.2	-57.1		85.6	572.0	90.4	27.8	1.000019
68500.0	51.9	-56.7		83.6	573.2	91.7	27.6	1.000019
69000.0	50.7	-56.3		81.4	573.0	93.0	27.4	1.000018
69500.0	49.5	-55.9		79.4	574.3	94.4	27.1	1.000018
70000.0	48.4	-55.5		77.4	574.7	96.1	26.8	1.000017
70500.0	47.2	-55.2		75.5	575.2	97.9	26.3	1.000017
71000.0	46.1	-54.8		73.6	575.0	100.9	24.9	1.000016
71500.0	45.1	-54.5		71.8	576.1	104.3	23.6	1.000016
72000.0	44.0	-54.2		70.0	576.5	92.0	22.4	1.000016
72500.0	43.0	-53.8		68.3	577.0	69.7	24.4	1.000015
73000.0	42.0	-53.5		66.6	577.4			1.000015
73500.0	41.0	-53.1		64.9	577.8			1.000014
74000.0	40.0	-52.8		63.3	578.3			1.000014

STATION ALTITUDE 4010.40 FEET MSL  
21 JULY 62 1352 HDT  
ASCENSION NO. 19

MANDATORY LEVELS  
2620220019  
11W 30  
TABLE-16

GEODETLIC COORDINATES  
32.80497 LAT DEG  
106.49714 LONG DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA		
					DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	5055.	30.1	9.1	27.	117.5	.6	
800.0	6818.	25.4	8.9	35.	120.8	1.1	
750.0	8664.	20.5	7.1	42.	64.1	3.0	
700.0	10603.	15.3	5.3	43.	65.0	4.6	
650.0	12646.	9.8	3.2	63.	64.0	6.2	
600.0	14808.	3.8	1.0	82.	54.9	7.6	
550.0	17108.	-1.0	-3.2	83.	19.9	3.4	
500.0	19590.	-5.0	-8.9	74.	79.6	7.5	
450.0	22282.	-10.0	-15.7	63.	51.0	3.1	
400.0	25232.	-16.0	-21.6	62.	94.2	5.8	
350.0	28492.	-23.1	-30.0	39.	106.7	11.5	
300.0	32136.	-31.4	-36.7	59.	93.4	12.8	
250.0	36286.	-41.3			60.0	11.0	
200.0	41134.	-52.8			101.4	17.6	
175.0	43923.	-58.4			55.4	12.5	
150.0	47058.	-64.6			91.1	17.0	
125.0	50660.	-70.3			50.2	16.0	
100.0	54999.	-69.6			84.2	30.5	
80.0	59415.	-64.8			95.6	20.9	
70.0	62106.	-62.0			104.0	21.4	
60.0	65254.	-59.3			95.4	25.4	
50.0	69030.	-56.0			93.7	27.3	
40.0	73721.	-52.8					

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 5912.75 FLE1 MSL  
21 JULY 62 1623 MDT  
ASCENSION NO. 02

SIGNIFICANT LEVEL DATA  
2020290002

L-28

TABLE-17

GEODETIC COORDINATES  
32.59927 LAT DEG  
106.40591 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	MILLIM. PERCIPIT
881.9 3912.7	34.7 10.1	33.0
874.0 4180.7	33.1 10.9	38.0
850.0 5003.5	30.1 15.0	42.0
788.1 7204.3	24.4 11.0	43.0
700.0 10564.6	15.2 5.1	51.0
658.0 12278.3	11.5 1.7	51.0
607.2 14464.8	5.4 -.4	60.0
581.9 15605.1	3.0 -3.0	61.0
527.3 15201.2	-3.7 -5.4	88.0
510.5 19042.5	-4.0 -5.0	91.0
500.0 19580.9	-5.2 -9.0	71.0
472.5 21035.9	-8.2 -11.0	75.0
457.2 21874.7	-10.1 -14.3	71.0
449.8 22280.6	-10.5 -15.2	69.0
411.1 24530.1	-18.0 -19.4	89.0
400.0 25213.0	-15.7 -21.7	60.0
385.0 26159.1	-18.0 -22.0	67.0
364.5 27498.4	-20.4 -31.2	37.0
331.5 29788.4	-25.5 -34.8	41.0
300.0 32145.1	-31.4 -37.6	54.0
292.4 32741.5	-33.0 -38.2	59.0
280.3 33717.2	-34.7 -43.3	41.0
250.0 36312.5	-41.3	
200.0 41169.3	-53.9	
181.0 43262.7	-57.9	
176.3 43809.2	-58.1	
163.7 45334.2	-62.2	
150.0 47101.6	-65.3	
124.6 50741.0	-71.3	
111.5 52041.5	-70.8	
107.4 53585.8	-69.2	
104.5 54215.0	-70.4	
100.0 55074.4	-69.5	
91.5 56081.7	-67.1	
77.0 60290.9	-65.2	
70.0 62224.3	-61.6	
54.3 67455.2	-58.9	
50.0 69179.3	-55.5	
43.3 72374.5	-52.4	

STATION ALTITUDE 3912.75 FEET MSL  
21 JULY 02 1623 MDT  
ASCENDING NO. 82

UPPER AIR DATA  
2020250002  
L-28

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

TABLE-18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3912.7	881.9	24.7	16.1	33.0	990.1	680.2	90.0	4.1	1.000294
4000.0	879.3	34.2	16.4	34.6	988.7	683.7	94.1	4.1	1.000295
4500.0	864.6	31.9	16.5	39.6	979.2	683.3	135.0	4.6	1.000293
5000.0	850.1	30.1	15.8	42.0	968.7	681.2	131.0	5.6	1.000290
5500.0	835.6	28.8	14.7	42.2	956.7	679.6	141.2	6.9	1.000283
6000.0	821.4	27.5	13.6	42.5	944.8	678.0	147.4	6.8	1.000276
6500.0	807.4	26.2	12.5	42.7	933.1	676.4	152.0	6.6	1.000270
7000.0	793.7	24.9	11.5	42.9	921.6	674.6	153.3	6.0	1.000263
7500.0	779.9	23.6	10.5	43.7	910.0	673.2	153.1	5.4	1.000258
8000.0	766.3	22.2	9.7	44.4	898.4	671.5	148.4	4.5	1.000253
8500.0	752.9	20.9	8.8	46.1	887.0	669.9	141.3	3.6	1.000248
9000.0	739.7	19.5	8.0	47.3	875.8	668.3	128.0	2.7	1.000243
9500.0	726.8	18.1	7.1	48.5	864.7	666.6	115.1	2.2	1.000238
10000.0	714.1	16.7	6.2	49.7	853.8	665.0	109.9	2.0	1.000233
10500.0	701.6	15.4	5.3	50.8	843.0	663.3	107.3	2.5	1.000228
11000.0	689.1	14.3	4.3	51.0	831.4	662.0	107.0	3.5	1.000223
11500.0	676.8	13.2	3.3	51.0	819.8	660.6	99.0	5.0	1.000218
12000.0	664.6	12.1	2.3	51.0	808.4	659.3	91.0	6.7	1.000214
12500.0	652.7	10.9	1.6	52.5	797.3	657.9	80.9	6.7	1.000210
13000.0	640.8	9.5	1.1	56.0	786.7	656.2	69.0	6.3	1.000207
13500.0	629.1	8.1	.7	59.4	776.3	654.6	50.7	5.2	1.000204
14000.0	617.7	6.7	.1	62.8	766.0	652.9	29.2	5.4	1.000201
14500.0	606.4	5.3	-.5	65.8	755.8	651.3	13.3	6.4	1.000197
15000.0	595.2	4.3	-2.0	63.7	744.9	650.0	8.3	7.7	1.000192
15500.0	584.2	3.2	-3.5	61.5	734.1	648.6	8.9	8.4	1.000187
16000.0	573.2	2.0	-3.9	65.1	723.6	647.2	8.3	8.3	1.000184
16500.0	562.5	.7	-4.1	70.3	713.4	645.7	7.7	7.9	1.000182
17000.0	551.9	-.6	-4.4	75.5	703.3	644.1	5.6	7.4	1.000179
17500.0	541.5	-1.9	-4.8	80.7	693.4	642.6	1.2	6.5	1.000177
18000.0	531.3	-3.2	-5.2	85.9	683.6	641.1	2.3	5.1	1.000174
18500.0	521.3	-4.0	-5.5	89.1	672.8	640.0	18.1	3.3	1.000171
19000.0	511.3	-4.6	-5.8	90.8	661.3	639.4	62.2	2.6	1.000168
19500.0	501.6	-5.1	-9.0	74.0	650.4	638.0	119.1	4.8	1.000161
20000.0	491.9	-6.1	-10.2	72.2	640.2	637.4	123.2	4.8	1.000158
20500.0	482.4	-7.1	-11.0	73.5	630.4	636.1	125.9	8.8	1.000155
21000.0	473.2	-8.1	-11.8	74.9	620.7	634.8	124.3	9.6	1.000152
21500.0	464.0	-9.3	-13.2	72.8	611.4	633.4	121.8	9.7	1.000148
22000.0	454.9	-10.2	-14.6	70.1	601.8	632.2	118.0	9.5	1.000145
22500.0	446.0	-11.2	-15.6	70.0	592.2	631.0	108.0	8.8	1.000142
23000.0	437.2	-12.9	-16.4	74.6	584.3	629.0	92.7	8.4	1.000140



STATION ALTITUDE 3412.75 FEET MSL  
21 JULY 82 1623 MDT  
ASCENDING NO. 82

UPPER AIR DATA  
2020290004  
E-LR

GEODETIC COORDINATES  
32.0927 LAT DEG  
106.40391 LONG DEG

TABLE-18 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMP AIR DEGREES	TEMP DEWPOINT CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) SPEED (KNOTS)	INDEX OF REFRACTION
23500.0	420.5	-14.5	-17.3	79.3	570.4	620.9	79.8	1.000137
24000.0	420.0	-16.2	-18.3	84.0	568.7	624.4	73.0	1.000135
24500.0	411.7	-17.9	-19.3	88.7	561.2	622.0	71.4	1.000133
25000.0	403.5	-18.4	-20.7	69.1	546.9	624.0	70.0	1.000129
25500.0	393.4	-16.4	-21.9	62.1	533.9	624.0	61.0	1.000125
26000.0	387.5	-17.6	-22.4	65.8	527.7	623.1	60.1	1.000123
26500.0	379.7	-18.6	-24.5	59.3	519.2	621.0	64.7	1.000121
27000.0	372.0	-19.5	-27.6	48.2	510.6	620.0	64.2	1.000117
27500.0	364.5	-20.4	-31.2	37.0	502.1	619.5	64.5	1.000114
28000.0	357.0	-21.5	-32.0	37.9	494.0	610.1	66.9	1.000113
28500.0	349.7	-22.6	-32.8	38.7	486.1	610.7	69.0	1.000111
29000.0	342.5	-23.7	-33.0	39.6	478.2	615.4	93.0	1.000109
29500.0	335.5	-24.9	-34.4	40.5	470.5	614.0	90.1	1.000107
30000.0	328.5	-26.0	-35.0	42.2	463.0	612.5	97.1	1.000105
30500.0	321.7	-27.3	-35.6	44.9	455.0	611.0	92.9	1.000103
31000.0	314.9	-28.5	-36.1	47.7	448.3	609.4	90.0	1.000102
31500.0	308.3	-29.8	-36.7	50.4	441.2	607.8	87.0	1.000100
32000.0	301.8	-31.0	-37.4	53.2	434.2	606.3	87.1	1.000098
32500.0	295.5	-32.4	-38.0	57.0	427.3	604.0	82.9	1.000097
33000.0	289.1	-33.5	-39.5	54.2	420.1	603.2	70.0	1.000095
33500.0	282.9	-34.3	-42.0	45.0	412.6	602.1	70.7	1.000093
34000.0	276.8	-35.4	-45.0	36.5**	405.6	600.7	66.1	1.000091
34500.0	270.8	-36.7	-48.3	28.6**	398.9	599.1	65.5	1.000089
35000.0	264.9	-38.0	-52.1	20.7**	392.3	597.5	65.1	1.000088
35500.0	259.1	-39.2	-57.1	12.8**	385.9	595.0	64.9	1.000086
36000.0	253.5	-40.5	-65.3	4.9**	379.5	594.2	67.1	1.000085
36500.0	247.9	-41.8			373.2	592.0	70.1	1.000083
37000.0	242.2	-43.1			366.8	590.9	75.1	1.000082
37500.0	236.7	-44.4			360.5	589.2	79.7	1.000080
38000.0	231.3	-45.7			354.3	587.0	63.0	1.000079
38500.0	226.1	-47.0			348.2	585.9	67.7	1.000078
39000.0	221.0	-48.3			342.3	584.2	94.1	1.000076
39500.0	215.9	-49.6			336.5	582.5	98.0	1.000075
40000.0	211.0	-50.9			330.7	580.8	102.0	1.000074
40500.0	206.2	-52.2			325.1	579.1	104.1	1.000072
41000.0	201.6	-53.5			319.0	577.4	104.7	1.000071
41500.0	196.9	-54.5			313.7	570.0	101.5	1.000070
42000.0	192.2	-55.5			307.7	574.0	90.7	1.000069
42500.0	187.7	-56.4			301.7	573.5	88.4	1.000067
43000.0	183.3	-57.4			295.9	572.2	76.0	1.000066

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA  
2020290000  
E-28

STATION ALTITUDE 3912.75 F T MSL  
21 JULY 62 1623 MDT  
ASCENSION NO. 82

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LON DEG

TABLE-18 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC MLTER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	170.9	-58.0		289.7	571.5	06.5	13.9	1.000005
44000.0	174.7	-58.6		283.6	570.6	57.9	14.7	1.000003
44500.0	170.5	-60.0		278.6	569.0	53.7	15.3	1.000002
45000.0	160.4	-61.3		273.6	567.0	54.5	15.2	1.000001
45500.0	162.4	-62.5		268.5	565.4	61.3	14.4	1.000000
46000.0	150.4	-63.4		263.0	564.3	67.4	14.0	1.000039
46500.0	154.5	-64.2		257.7	563.1	72.9	13.9	1.000057
47000.0	150.8	-65.1		252.5	561.9	76.6	14.0	1.000056
47500.0	147.0	-66.0		247.2	560.6	79.6	14.2	1.000055
48000.0	143.3	-66.8		242.0	559.7	80.5	14.3	1.000054
48500.0	139.8	-67.6		236.9	558.5	81.1	14.4	1.000053
49000.0	136.3	-68.4		231.9	557.4	70.6	13.7	1.000052
49500.0	132.9	-69.3		227.0	556.3	60.1	13.6	1.000051
50000.0	129.6	-70.1		222.3	555.2	57.9	15.4	1.000050
50500.0	126.3	-70.9		217.6	554.0	59.0	17.5	1.000048
51000.0	123.2	-71.2		212.5	553.0	76.6	22.7	1.000047
51500.0	120.0	-71.1		207.0	553.7	85.8	28.9	1.000046
52000.0	117.0	-71.0		201.7	553.9	88.6	34.5	1.000045
52500.0	114.0	-70.9		196.4	554.0	90.1	38.7	1.000044
53000.0	111.2	-70.7		191.2	554.4	90.2	38.7	1.000043
53500.0	108.4	-69.4		185.3	556.1	91.9	38.1	1.000041
54000.0	105.6	-70.0		181.2	555.3	97.6	36.5	1.000040
54500.0	103.0	-70.1		176.7	553.1	103.4	34.6	1.000039
55000.0	100.4	-69.6		171.6	553.6	107.4	30.9	1.000038
55500.0	97.9	-68.9		167.0	550.7	111.6	27.4	1.000037
56000.0	95.5	-68.3		162.3	557.6	114.6	23.7	1.000036
56500.0	93.1	-67.6		157.8	558.5	117.3	20.4	1.000035
57000.0	90.8	-67.0		153.4	559.3	115.1	18.4	1.000034
57500.0	88.5	-66.8		149.4	559.7	112.4	16.4	1.000033
58000.0	86.3	-66.5		145.3	560.1	108.9	14.9	1.000032
58500.0	84.2	-66.2		141.7	560.4	104.5	13.5	1.000031
59000.0	82.1	-65.9		138.1	560.8	110.6	14.4	1.000030
59500.0	80.1	-65.6		134.5	561.2	116.1	15.5	1.000030
60000.0	78.1	-65.4		131.0	561.6	121.1	17.3	1.000029
60500.0	76.2	-64.8		127.4	562.3	125.2	19.2	1.000028
61000.0	74.4	-63.9		123.6	563.6	120.2	21.8	1.000028
61500.0	72.5	-62.9		120.2	564.6	114.7	24.9	1.000027
62000.0	70.8	-62.0		116.6	566.1	111.1	27.2	1.000026
62500.0	69.1	-61.5		113.7	568.0	106.5	29.0	1.000025
63000.0	67.4	-61.2		110.8	567.2	107.2	29.1	1.000025

GEODETIC COORDINATES  
32.89927 LAT DEG  
106.40591 LONG DEG

UPPER AIR DATA  
2020290002  
L-28

TABLE-18 cont'd

STATION ALTITUDE 5912.75 F. I. MSL  
21 JULY 62 1623 MDT  
ASCENDING NO. 82

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
03500.0	65.8	-60.9		108.0	367.5	100.0	27.3	1.000024
04000.0	64.2	-60.7		105.3	367.9	104.0	25.9	1.000023
04500.0	62.7	-60.4		102.6	368.2	98.0	25.3	1.000023
05000.0	61.2	-60.2		100.1	368.5	91.0	25.0	1.000022
05500.0	59.7	-59.9		97.5	368.9	85.2	25.2	1.000022
06000.0	58.3	-59.7		95.1	369.2	80.1	25.7	1.000021
06500.0	56.9	-59.4		92.7	369.6	77.8	26.7	1.000021
07000.0	55.5	-59.1		90.4	369.9	77.5	27.4	1.000020
07500.0	54.2	-58.8		88.1	370.4	81.9	27.2	1.000020
08000.0	52.9	-57.8		85.6	371.7	86.4	27.5	1.000019
08500.0	51.7	-56.8		83.2	373.0	91.0	28.9	1.000019
09000.0	50.4	-55.9		80.8	374.3	94.9	30.5	1.000018
09500.0	49.2	-55.2		78.7	375.2	96.6	32.7	1.000018
10000.0	48.1	-54.7		76.7	375.6	98.4	34.6	1.000017
10500.0	47.0	-54.2		74.8	376.4	99.4		1.000017
11000.0	45.9	-53.7		72.9	377.1			1.000016
11500.0	44.8	-53.3		71.0	377.7			1.000016
12000.0	43.8	-52.8		69.2	378.3			1.000015

STATION ALTITUDE 3912.75 F (1 MSL)  
21 JULY 82 1623 MNT  
ASCENSION NO. 82

MAINTENANCE LEVELS  
2020290062  
E-28

GEOGRAPHIC COORDINATES  
32.69427 LAT DEG  
106.40591 LON DEG

TABLE-19

PRESSURE (GEOPOTENTIAL)		TEMPERATURE		REL. HUMID. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	TEMP POINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
650.0	5000.	30.1	15.8	42.	131.0	5.6
600.0	6766.	25.5	12.0	43.	152.9	6.3
750.0	8615.	20.6	8.7	46.	138.9	5.4
700.0	10554.	15.2	5.1	5.	107.3	4.6
650.0	12601.	10.6	1.5	53.	70.5	6.7
600.0	14768.	4.7	-1.4	65.	10.4	7.1
550.0	17077.	-8.	-4.4	76.	5.1	7.2
500.0	19554.	-5.2	-9.8	71.	120.3	5.1
450.0	22243.	-10.5	-15.2	60.	112.7	9.1
400.0	25171.	-15.7	-21.7	60.	79.0	8.8
350.0	28432.	-22.6	-32.8	39.	89.4	10.8
300.0	32081.	-31.4	-37.6	54.	86.9	12.5
250.0	36233.	-41.3			68.9	11.2
200.0	41070.	-53.9			103.7	11.9
175.0	43850.	-58.5			50.4	14.6
150.0	46974.	-65.3			77.1	14.0
125.0	50564.	-71.2			67.0	19.2
100.0	54909.	-69.5			107.9	30.5
80.0	59327.	-65.6			116.1	15.5
70.0	62011.	-61.6			110.0	27.9
60.0	65157.	-60.0			86.9	25.1
50.0	68919.	-55.5			95.5	31.1

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

DATE  
FILMED  
8